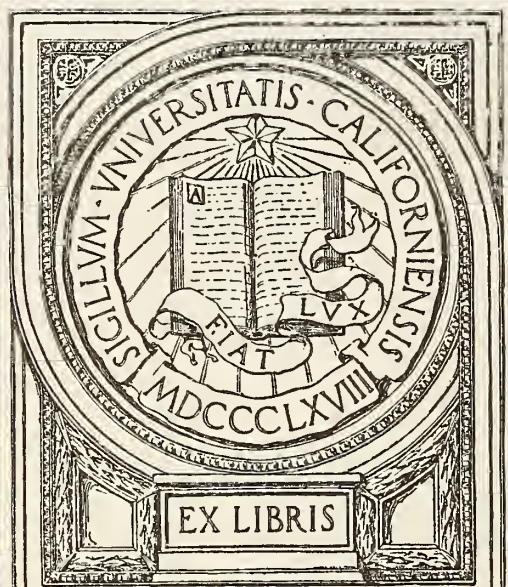



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VOLUME XXIX

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FEEDING AND THE NUTRITIONAL DISORDERS OF INFANCY*

JULIUS H. HESS, M. D.

CHICAGO, ILL.

This series of clinical conferences is inaugurated with the assumption that the University of Michigan Medical School and the Michigan State Medical Society have in mind the presentation of a practical review of the practice of medicine, together with the more recent advances in our knowledge and understanding as applied to infants and children.

It is with due appreciation of the many advances in our present knowledge which have originated with the faculty of your great medical school and the profession of your state that I address you on the subject of "Feeding and the Nutritional Disorders of Infancy and Childhood."

To quote briefly from an address by Dr. Guy L. Kiefer of your Board of Health before the Third Annual Conference of Public Health, held in March of this year, "it became evident that instead of devoting all their time to the care of sick people, physicians should make it part of their professional work to keep well people well. How this change developed is best seen in the specialty of pediatrics. Now the mothers are trained to prevent disease. They are

shown how to keep the baby well from the day it is born. The private practice of preventive medicine, as far as babies are concerned, followed."

Dr. M. L. Harris, President-elect of the American Medical Association, in his address on Periodic Health Examination before the Illinois State Medical Society in May, 1929, stated: "To justify the medical profession in urging periodic health audits on the people, it must be clearly demonstrated that such examinations not alone tend to prolong the life of the individual, but that they also add to his health and happiness and usefulness to others. During the last quarter of a century from ten to twelve years have been added to the

* Conference under the auspices of the Couzen's Children's Fund of Michigan.

**Dr. Julius H. Hess is a graduate of the Northwestern University Medical School, 1899. He is at present Professor of Pediatrics in the University of Illinois College of Medicine, Chicago, Ill.

average expectancy of life. This increase in the average expectancy of life is due almost entirely to a greatly diminished mortality rate during the first few years of life so that a much larger proportion of individuals live to adult age. In fact, there has been practically no increase in life expectancy of those fifty years of age or over. If periodic health examinations are to accomplish great good they must be begun early in life when the defects that are discovered are still remedial and the regenerative and recuperative powers of the body are at their highest state of efficiency."

INFANT FEEDING—ITS PRESENT STATUS

The reception accorded the infant welfare movement in recent years impressed us with the demand for more serious consideration of the infant. Recognition of this fact by the profession has resulted in a profound reduction in infant morbidity and mortality.

To be successful in infant feeding we must have a knowledge of the fundamental dietetic requirements of the infant. The older members of the profession can readily recall not so many years ago when infant feeding was largely conducted by proprietary food manufacturers, often by direct correspondence with parents. Then came the period during which infant feeding received its full recognition in the medical curriculum, but now infant feeding seems to again be drifting out of the hands of the profession and various food manufacturers are more or less acting as self-appointed instructors.

The practitioner should consider the control of the feeding of infants as a prerogative of his profession.

There is no perfect substitute for human milk in the feeding of the infant. All endeavors made to feed an infant on a food not primarily intended for this purpose must be considered as trials at milk adaptation. No single diet can possibly meet the needs of all infants.

It must be our object, first, to formulate our rules so as to make them safe and adaptable to the feeding of the majority of well babies. The food recommended will be excessive for some and inadequate for others.

While many excellent results have been reported with the various methods described for artificial feeding of infants, we believe that we must concede that the methods are all more or less empirical, and

the result will be in considerable degree dependent upon the wide range of food tolerance of the healthy infant. The successful physician must depend on the clinical observation of the individual infant for the success of the method of feeding which he is using. Every formula with which we start feeding should be looked upon in the light of an experiment, and the reaction of the infant to this feeding should be studied carefully.

I believe that the attempts toward ultra refinement of the infant's diet have led to considerable confusion because of the different conclusions of the various schools undertaking the work. *The pressing needs of today call for a safe and practical solution of the feeding problem for the everyday baby in everyday life.*

In advancing the rules for feeding the normal healthy infant on sweet cow's milk dilutions to which carbohydrates and vitamin rich foods have been added, it is to be emphasized that in clinical experience they have been found safe for the baby and practical for the physician, which latter is neither to be overlooked nor taken lightly.

The clinical aspects as represented by the infant's disposition, temperature, weight, stools and hemoglobin, must be given equal consideration with the energy value of the formula. In a consideration of the latter the chemical composition must be considered of equal importance with the caloric value. Otherwise, one meets with profound disturbances due to feeding of insufficient or excessive amounts of the components of the diet, difficult of interpretation. Again we must not overlook the fact that the constituents of the diet must be in such form as to permit normal digestion and assimilation.

MILK DILUTIONS WITH THE ADDITION OF CARBOHYDRATES

If milk dilutions with the addition of carbohydrates are used, the simplest and most natural standard would be one which would tell us how much milk, water and carbohydrates per pound or per kilogram body weight the baby should get. To be exact, we should express, or at least be aware of, the number of grams of proteins, fats, carbohydrates and salts the infant is receiving for each pound or kilogram of its body weight.

Milk necessary per pound or kilogram of body weight. An average normal infant should receive each day a *minimum* of one

and one-half ounces of cow's milk per pound of body weight. (100 c.c. per kilogram). Many infants will require amounts approximating two ounces per pound of body weight. (130 c.c. per kilogram).

During the first days of life smaller quantities of whole or skim milk are indicated.

Underweight infants may require quantities approximating three ounces per pound for satisfactory gain. (200 c.c. per kilogram).

Food increases should be gradual.

ONE AND ONE-HALF OUNCES OF GOOD
AVERAGE COW'S MILK CONTAINS:

Protein	1/20 ounce	(1.5 grams)
Fat	1/17 ounce	(1.8 grams)
Carbohydrate	1/15 ounce	(2.0 grams)

The following facts will be of assistance in estimating average, under and overweight in individual infants: Seven pounds may be taken as an average birth weight. Most normal infants will double this in their first five months and treble it by the end of their first year. Accordingly, infants should gain about five ounces a week during their first five months and should show gains of approximately four ounces a week during the last seven months of their first year.

Water Required. The amount of water to be added to the mixture will be governed by the number of feedings and their amount. Young infants will require one-fifth of their body weight in fluids daily, 3 ounces per pound (200 c.c. per kilogram). These amounts may be gradually decreased until in the last months of their first year one-eighth their body weight, 2 ounces per pound (130 c.c. per kilogram), will suffice. Some infants will not be able to assimilate such large quantities in the designated number of meals. In such instances water may be given between feedings to complete their fluid requirements.

Carbohydrates to Be Added. Normal full-weight infants will usually require a minimum addition of one-tenth ounce (3 gm.) of sugar to the milk mixtures for each pound of body weight (6.6 gm. per kilogram). For underweight infants the amounts should at first be calculated on the basis of their present weight, but increased if well taken, to coincide with the amounts indicated for a full-weight infant of similar age.

Cane sugar fulfills our requirements for most cases.

Milk sugar acts as a laxative in many infants and unless the laxative effect is desirable it has no advantages.

Maltose and dextrin compounds are acceptable to the infant's digestion in somewhat greater quantities than cane or milk sugar. They are not as sweet as cane sugar. Because of the high dextrin content, some of the products on the market may be constipating.

Corn syrup (Karo Red Label) contains dextrin—36 per cent, maltose 22 per cent, dextrose 7.4 per cent and sucrose 9 per cent. One fluid ounce equals one avoirdupois ounce of sugar.

A tendency to stationary weight is often relieved by the addition of cereal water as a diluent in the form of oatmeal, rice or barley water.

To Break the Curd to Assist in Digestion of Cow's Milk. Many infants can digest raw cow's milk. When not well taken the tendency to formation of large protein curds is relieved by boiling the milk from two to three minutes over the flame, or better, by putting it in a double boiler and heating until the water in the outer vessel boils eight minutes.

Although the curd is less finely divided by the use of the double boiler, as compared with boiling on the direct flame, it answers the purpose of most infants and causes fewer changes in the milk.

In my own practice all milk feedings are boiled.

Orange juice or acidified milks, as lactic acid milk, precipitate with a fine curd. The same is true of evaporated milk, condensed milk and various reconstructed milks.

Caloric Requirements. A normal infant should receive on the average 45 to 55 calories per pound body weight.

Underweight infants require from 50 to 65 calories per pound depending upon their age and development.

Increases in quantity of food should always be gradual, especially in marasmus, and the infant carefully observed and the increases made only as the tolerance for food permits.

The food formula of a baby making a satisfactory gain in weight should not be changed without a well defined indication.

Estimation of the caloric content of the food is not a feeding method and should be used only as a check on over and under feeding. The scale, stools and general condition, and particularly the disposition of the infant, are the ultimate guides for dietetic changes.

CALORIC VALUES OF VARIOUS FOODS

Cow's milk	20 Calories per Ounce
Human milk	20 Calories per Ounce
Skimmed milk	10 Calories per Ounce
16% cream	54 Calories per Ounce
Skim lactic acid milk	10 Calories per Ounce
Protein milk	12 Calories per Ounce
* Cane and Milk Sugar	120 Calories per Ounce
Corn Syrup (Karo)	120 Calories per Ounce
(By liquid measure)	120 Calories per Ounce
Flour	100 Calories per Ounce
Maltose-dextrin Compounds,	
(Average)	110 Calories per Ounce
Cereal Waters, (1 ounce Cereal	
to quart)	3 Calories per Ounce

EQUIVALENTS OF ONE OUNCE OF CARBOHYDRATES AND THE DOMESTIC MEASURES

	By Weight	By Measure	Tablespoonfuls
Cane Sugar	1 oz. 30 Gms.	1.00 oz.	2
Milk Sugar	1 oz. 30 Gms.	1.50 oz.	3
Maltose-dextrin	1 oz. 30 Gms.	1.50 oz.	3
Corn Syrup		1.00 oz.	2
Flour (wheat)	1 oz. 30 Gms.	2.25 oz.	5
Flour (barley)	1 oz. 30 Gms.	1.50 oz.	3
Barley (pearl)	1 oz. 30 Gms.	2.50 oz.	5
Oats (rolled)	1 oz. 30 Gms.	2.50 oz.	5
1 tablespoonful equals 1.5 dessertspoonfuls equals			
3 teaspoonfuls (level)			

FEEDING EXAMPLE

Normal infant—age three months. The infant should weigh 11 lbs. (Average birth weight 7 pounds, plus 4 pounds, representing a gain of 5 ounces weekly for thirteen weeks). Estimating $1\frac{1}{2}$ ounces of milk per pound body weight, give $16\frac{1}{2}$ ounces of milk. Adding 3 grams of cane sugar per pound, or 1 ounce for each 10 pounds, is 1.1 ounces of sugar, or approximately $2\frac{1}{4}$ level tablespoonfuls per 11 pounds.

The infant should receive total fluids approximating $\frac{1}{6}$ of its body weight, or $2\frac{1}{2}$ ounces per pound body weight, or for the day $27\frac{1}{2}$ ounces. This would require the addition of 11 ounces of water.

The infant should be fed five times daily and should receive $5\frac{1}{2}$ ounces of the mixture at each feeding.

A fruit juice and either cod liver oil, viosterol or viosterol in cod liver oil should be included in the diet.

	Ounces	C.C.	Protein	Fat	Carbo- Hydrate	Salts	Calories
Milk	16.5	495	17.3	19.8	19.8	3.46 Gm.	346
Water	11.0	330	.....	.....	.....	.....	.....
Sugar	1.1	33 Gm.	.....	.....	33.0	.....	132
Total Fl.	27.5	825	17.3	19.8	52.8	3.45 Gm.	478
For each pound body weight			1.575	1.8	4.8	0.31 Gm.	43

Additional Foods From the Second to the Sixth Month. The milk mixtures may be supplemented by the following additions to the diet:

Cereal waters may be used if desired as the diluent beginning with the second month. These are best made from whole cereals, as the dextrinized flours are devitalized.

Orange juice should be started during

the first month, beginning with one teaspoonful, diluted with water, twice daily, and increasing gradually until two ounces are given by the fourth month.

Cod liver oil should be started before the second month, beginning with 15 drops twice daily and increasing to one teaspoonful twice daily by the end of the fourth month—from spoon or dropper.

Viosterol or viosterol in cod liver oil may be used in place of plain cod liver oil. The daily prophylactic dose of viosterol for the average infant is 8 to 10 drops, for the premature and rapidly growing infant, 15 drops. It is preferable to start with smaller doses, increasing gradually over a period of two weeks. Mild cases of rickets require 15 drops and moderate cases 20 drops. Exceptionally severe cases, late rickets and osteomalacia may require as much as 30 drops for limited periods.

If viosterol in cod liver oil is used the dose is $\frac{1}{4}$ to 1 teaspoonful twice daily.

Cereal gruels (oatmeal, farina, cream of wheat) can be started by the beginning of the fifth month. They should be well cooked. The gruel can be added to one of the mid morning meals and later to the evening meal as well, starting with one-half tablespoonful and increasing gradually until two or three tablespoonfuls are given twice daily.

Additional Foods from the Sixth Month to the End of the First Year. A broth and vegetable meal may be gradually substituted for the midday meal at the sixth month. This is best given as a vegetable soup. Feeding should begin with one ounce, gradually increased to eight ounces, one ounce of milk mixture being omitted for each ounce of soup given. If less than a full feeding is given, the meal should be finished with sufficient milk mixture from a second bottle, to make a full feeding.

Strained vegetables (spinach, carrots, potatoes) may be added in small portions by the eleventh or twelfth months, as a side dish. There is little advantage in so using them before this time, for the vegetables in the soup, when rubbed through a fine sieve, are incorporated in the broth.

Toast or dried bread crumbs may be added to the soup if desired.

Stewed fruits (apples and prunes) may be fed in small quantities by the end of the first year. So far as their vitamin content is concerned, they are inferior to orange juice.

Fruit Juice Milks—Milk Acidified with Orange Juice. Orange juice can be added to cow's milk in amounts of 1 ounce (30

c.c.) to each pint of milk in the mixture. If the milk is stirred while the orange juice is being poured in there will be no curdling.

It should be emphasized that the amount of orange juice advised to bring about the described chemical changes in the milk, namely, small curd formation, a pH approximating 6.0 and denaturization of the proteins, is 1 ounce to each pint of milk in the mixture; in other words, a mixture containing 1 pint of milk and 1 pint of water would have 1 ounce of orange juice added. Orange juice milk can be started as early as the second or third week of life. When first added to the infant feeding it should be added in amounts of one-half ounce to the pint of milk. Occasionally an infant who receives the full amount will show some flatulence and looseness of the bowels, more especially when very sour oranges are used. In such cases it may be reduced to one-half ounce to the pint of milk. An ounce of orange juice to the pint of milk may be considered as a maximum addition.

The orange juice milk stools are usually of a light yellow color and more plastic than are seen in infants fed on similar mixtures without the orange juice addition.

Egg Yolk Additions. In addition to fruit juices, yolk of raw egg with its high iron, fat-soluble A and antirachitic vitamin content can be added to advantage. I start with an amount approximating one-fourth of a teaspoonful of a fresh yolk by the time the infant is three or four weeks of age and increase the amount to a whole yolk by the end of the third month of life. Care should be used in selecting eggs of good quality. An average yolk is approximately three teaspoonfuls.

About *ten per cent* of infants will show evidence of moderate sensitization by the development of skin rashes or colic if it is increased too rapidly. About *two per cent* of our series of cases evinced a true anaphylactic reaction with associated vomiting and diarrhea. In no case was it of a serious nature. Therefore when first introducing egg yolk, only a few drops should be added to the mixture. Many infants with eczema can take egg yolk—try them out with minimal additions. Egg white idiosyncrasies are far more common than those due to egg yolk. Care should be exercised in separating the egg yolk from the white.

Coddled instead of raw eggs may be used.

The orange juice and egg yolk are added after the milk has been boiled and cooled.

They are simply stirred and not beaten into the milk mixture.

This fruit juice and egg yolk mixture contains all of the known vitamins in large amounts, the iron greatly needed by the artificially fed infant, and other valuable mineral constituents.

Lactic Acid Milk. If milk is first sterilized or pasteurized and then inoculated with a pure culture of the Bulgarian bacillus, streptococcus lacticus or B. acidophilus, a lactic acid milk will be produced which is entirely free from harmful organisms. Bacterial inhibition begins at pH 5.0 and is almost complete at a pH of 4.0. A growth of even the lactic acid producing organisms is inhibited and the acidity does not become much higher, even though incubated for long periods.

Whole lactic acid milk may be prepared by two methods; by the artificial souring of milk by acid-producing organisms and by the direct addition of lactic acid to sweet milk. Milk artificially soured by lactic acid organisms can be prepared at home. In practice I use milk soured by cultures rather than that made by the addition of U. S. P. lactic acid, when the diet is indicated. Carbohydrates are added in the same amounts as recommended for fresh milk mixtures. Corn syrup may be used instead of sugar, one to one and one-half ounces by measure of the syrup being added to the day's food.

Dried Milks. Of all powdered milk foods the whole, part skimmed and fat free sweet milks and lactic acid milks are the most rational for infant feeding because they call for reconstruction into formulae correctly adapted to the individual infant's needs. Dried protein (albumin) milks are in a class by themselves.

Dried Sweet Milks. Through intensive advertising the manufacturers of dried milks have created a large market for their products. While they have a legitimate place among foods which may be used for infant feeding there is no indication for their replacing fresh cow's milk of good quality. There is a tendency to give more calories when feeding dried milk than when prescribing fresh cow's milk. Frequently dried milks are given with less modification than is cow's milk, especially with less sugar addition. Results obtained with dried milk are only comparable to those obtained with fresh cow's milk when they are given in the same physiological concentrations. The fat-reduced dried

milks are open to the same objections that attend the use of fresh skimmed milk.

Dried milks are especially useful in the presence of a questionable milk supply, as an early complementary food for nursing infants, and while traveling. In emergencies such as the delivery of spoiled or frozen milk they offer a safe source of food supply.

Because of their soft friable curds and small fat globules they offer a valuable medium when concentrated foods are indicated in anorexia, vomiting and malnutrition, thereby increasing the caloric intake. This can be accomplished either by adding an increased amount of powder to water or by additions of powdered milk to fresh milk formulae.

Dried Cultured Lactic Acid and Protein Milks. Several firms now produce dried lactic acid milks which can be used when freshly prepared cultured milks are not available.

They are of value as a complementary or substitute feeding for the breast-fed infant whose stools have a tendency to be loose or frequent. This is particularly true of dried lactic acid milk.

Dried protein milk and lactic acid milk have an especial value as therapeutic diets in diarrheal disorders.

In prolonged feedings with powdered milks, orange juice, cod liver oil or egg yolk must be added to the diet.

As some of these milks are prepared by the drying of the cultured lactic acid milk and others by drying sweet milk mixtures soured by the addition of U. S. P. lactic acid, it is necessary for the physician to become acquainted with the various products of different manufacturers if constant results are to be expected.

Unsweetened Evaporated Milks. They are made by heating the milk to 200 degrees F. and then transferring it to vacuum pans, where it is maintained at a temperature of 125 degrees F. until sufficient water is evaporated to bring the product to the required condensation. In most products this milk is about double strength.

The sugar content not being in excess, these milks can be so diluted that a reasonable amount of fat and protein may be obtained with, however, a considerable deficiency in sugar. This relatively low amount of carbohydrate can then be made up by adding sugar (cane, maltose-dextrin compounds or corn syrup) much the same as is done with cow's milk. Vitamins A and B are probably not injured by the evaporation process, but Vitamin C is less heat stable. Orange or tomato juice is needed.

The habit of prescribing a diet for an infant and then leaving it to the mother's discretion to increase or even decrease the food as she may see fit is doing the child a tremendous injustice. Those who have had large experience in the feeding of children with nutritional disorders can testify to the large percentage of rickets, tetany, scurvy and acute gastric and intestinal upsets which would have been avoided by timely dietetic and hygienic instructions to the mother and the nurse in charge had they appeared for periodic examination. I wish to convey the impression that there is such a tendency on the part of the laity when canned products are prescribed, unless mothers are properly warned. Mothers should, therefore, be forewarned of the need for periodic return for physical examinations and upon their revisits the physician should give these infants his best thought.

POISONOUS DRIVING

It is absolutely imperative that the police call a sharp halt on the thousands of drivers of motor vehicles in this city who have fallen into the vicious habit of traveling about with clouds of bad smelling vapors and poisonous gases spouting from exhaust pipes. The condition arising as a result of the practice has grown so bad that it is more than a mere nuisance; it is a peril. The pollution of air has become deleterious to health and even a threat to life. And it is altogether without excuse.

The modern motor vehicle is equipped with an engine which makes emission of smoke, vapor or gas easily avoidable under every ordinary circumstance, if it is kept in a proper condition,

correctly fueled, and run intelligently. A long filthy, floating stream in the rear of a motorbus (and the city busses are bad offenders), private car, or truck, is an evidence of ignorance or negligence, and convicts the driver of lawlessness. For the ordinance is definite in forbidding anything of the sort. We think it also is quite fair to say that the general condition to which we are calling attention is an evidence of large neglectfulness on the part of the police, since it is up to them to see that city regulations are obeyed, and it is quite plain that for a long time little or no attempt has been made to enforce the one against vaporous, gaseous driving.—Detroit Free Press.

VICTOR C. VAUGHAN, M. D. LL. D.—AN APPRECIATION

C. B. BURR, M. D.

FLINT, MICHIGAN

Accepting the definition of genius as "remarkable aptitude for some special pursuit", a painstaking biographer would find himself at once and irreconcilably at variance with Dr. Vaughan's estimate of his own qualities. He writes in "A Doctor's Memories":

"I am not a Chinaman and do not practice ancestor-worship, but I do respect my forebears and acknowledge my indebtedness to them. They have transmitted to me no spark of genius. I am not aware that any of them ever possessed such a gift, be it in form of a blessing or a curse"

His descent in the maternal line was from French Huguenots who came to this country in 1699, settled at first on James River, eventually dispersed through Virginia and North Carolina. His family so far as he could ascertain, "bred constantly plain people, honest according to the standards of its several generations and rebellious to dictation from others in religion, morals and politics."

Ample confirmation of the final sentence in the above quotation from the "Memories" is furnished by an episode in his career at the University of Michigan. While the matter of promotion was pending in the Board of Regents, the charge of atheism was introduced. To Dean Palmer, who in agitation revealed this and suggested the importance of denial, he said: "Tell the Board that I decline to make confession of faith to them. The position concerns the teaching of science and has no relation to religious belief."

And resistance to coercion was natural and ingrained. An ancestor fought in the Revolution, a relative had part in the Black Hawk War, another was surgeon in the Confederate army and his father served for a time in the United States Army.

Dr. Hubert Work, President in 1920, of the American Medical Association, is quoted as saying, "You all know that Dr. Vaughan is already known as the greatest man in American medicine in Michigan, and a great many of us believe he is the greatest man in American medicine today." Obviously appraisal of the values of such a life must be a composite product and can from no particular pen, however facile, appear even measurably just and complete. Much less may an estimate from the present writer all too ill equipped for the service, fulfill requirements and be satisfying. The opportunity is welcomed, however, to pay tribute to this extraor-

dinary man, my friend. I admired him and to employ a good old-fashioned word "liked" him. Every confidence or suggestion he ever gave me was prized and for many, many years I felt definitely at home in his company.

My memories of Dr. Vaughan hark 'way back to the winter of '76-7, when young, verdant and inadequately prepared, I became a student in the Medical Department of the University of Michigan. He was also young—five years my senior, but he had a cultural and pedagogic background. In passing, it may be mentioned that nothing whatever of this was displayed in his attitude toward students. Indeed, his sympathetic understanding and considerateness related him perhaps more closely with them than with the teaching staff of the department, all older and highly worthy men who had *arrived*. However, he was at that time definitely on his own way to distinction.

Coming from Mount Pleasant College, Missouri where he was graduated in 1872 and taught Latin and chemistry until 1874, lured by Douglas and Prescott's Qualitative Analysis which decided in his mind the long debated question whether to choose the classics or science for his life work, he came to the University of Michigan for post-graduate study. There he acquired in 1875, the degree of Master of Science, in the following year that of Ph. D., and in 1900 an LL. D.

He entered the medical school in 1876 and was graduated two years later. Before matriculation therein he had acted as voluntary and temporary demonstrator in the dissecting room. His appointment as instructor in physiological chemistry followed the enforced retirement of Professors Douglas and Rose which came about through careless business methods and was, he declares, "a regrettable and sorrowful affair."

In his first appearance before the student body he tactfully avoided any subject

in chemistry and spoke on "The Structure and Function of the Kidney." Potentially hostile partisans on both sides of the controversy were placated and all went out singing, "He's a Jolly Good Fellow." Commenting upon this in "Memories" he writes: "During the forty-five years that I continued to lecture to medical students not one has ever shown me the slightest disrespect in classroom or elsewhere."

During my brief student days in the University he was instructor in the chemical laboratory over which presided the distinguished Dr. A. B. Prescott who "with a benignant smile and a genial voice answered the student's queries both the wise and the unwise." What Dr. Vaughan thus writes was equally true of his own painstaking efforts—greatly appreciated by students. There was, naturally, nothing which savored of intimacy between

himself and them but a cordiality existed in their relationship. My own acquaintance with him, of course quite casual at the time, ripened eventually into enduring friendship and is treasured as a choice possession.

I never suspected until encountering the story in "A Doctor's Memories" that his early education had been all 'round of such a liberal character. That he was gifted as a teacher all having acquaintance with his methods can testify and it is plain that fa-

miliarity with the classics lent much to the well chosen diction present in both his verbal and written productions.

It was the theory of President Terrill, the "greatest educator (he) ever knew," of Mount Pleasant College, where Dr. Vaughan became the "Alpha and Omega of the advanced class in Latin," that no one "knows anything until he can state it in writing."

To Dean West of Princeton, Dr. Vaughan said: "Although my adult life has been given to the sciences, I wish to testify that the first author to stimulate the pyramidal cells of my cerebral cortex was old Virgil and even now in my old age, there is only one book which I prefer to Virgil and that is Dryden's translation, which I read with less effort." (Memories) Of Professor Frieze he writes that to be with him "was to receive lessons in grace and courtesy. He



DR. VICTOR C. VAUGHAN

(This illustration is printed here through the courtesy of the Michigan Alumnus where it appeared on the cover of The Alumnus of November 30th.)

was my ideal of a learned man. I could not make of him a Trojan hero; not even an Aeneas; he was Virgil himself." (Memories)

Concerning his old home in Missouri, "colored by the imagination of Walter Scott, the stately lines of Virgil and the eloquence and wisdom of the great pagan, Cicero," he is no less than poetic. Of the vicissitudes of childhood when during the Civil War brother was arrayed against brother, and where he learned to love peace

so dearly that a willingness to fight for it developed, he writes thrillingly but without bitterness.

"Whatever I may intend to say," he declares, "when I am to make a speech, when I actually begin to talk, I always give expression to my convictions." "God pity the country,"—he exclaimed, "in mental frenzy," at a mass meeting where there was considered a call to arms for the Spanish-American war—"whose tramps must fight its battles." This speech Dr. Vaughan humorously writes, brought about a commission from Governor Pingree. "Some enlist because they like the soldier's life, some for patriotic reasons, but I received my commission because I talked too much."

No manner of doubt exists in the minds of those who knew him well that he spoke from conviction. His language was plain and forceful. At a meeting of the State Medical Society in 1883, he said, "I have attended several meetings . . . but never before have I known the Committee on Admissions to wait so long before reporting. There is an apparent intention at least to choke off those who have come here to join this Society." During a symposium in the same Society in 1894 he inquired—I can hear his voice—"whether there were any bacilli in those guinea pigs, anywhere in those guinea pigs when they died of tuberculosis." The one interrogated could not reply "off hand." He (Vaughan) thought the logic employed in the discussion was bad . . . that "the only possibility of controlling the spread of consumption consists in the destruction of the bacillus."

Those who have been perplexed and irritated by the frequent neologisms purveyed in medical nomenclature are entitled to a chuckle over his pronouncement, "the coining of new words is sometimes mistaken for progress in science." His "Memories" are shot through with practical humanistic philosophy.

From early years at the University the Vaughan home was an open house for students. During forty-five years teaching no graduate of the Medical School "escaped" an invitation there. His disciplinary measures toward the careless and intemperate consisted at first in a warning which betrayed acquaintance, chapter and verse, with the student's shortcomings. He was accustomed in classes to emphasize the danger to others through impure contacts. His "as an individual you are of no importance anyhow, risk getting venereal

disease if you must" was apt to be efficacious with the lustful.

His rise was rapid. In 1887 he became Dean of the Medical faculty. Among his choice "Memories" are appreciations of his sometime colleagues.

Dr. Ford "knew anatomy, both human and comparative. He lived it and taught it in a way that held the individual attention of every student—he awakened a love for it in his hearers."

Alonzo B. Palmer was "a great teacher of internal medicine."

George E. Frothingham "was my preceptor and I can not speak of him without love and reverence."

"Maclean was a most fascinating man. I do not think that any teacher in the University within my time was so greatly admired by the students as he."

Of Dr. Charles B. de Nancrede he writes, "I cannot overestimate the service rendered to the University by this man."

Of Dr. Darling, Dr. de Nancrede's successor, he "honored his chief and himself in a splendid way."

And of a venerable friend, "I left the cottage bearing in the memory chamber of my brain a portrait of a saint such as no old master ever painted."

When he resigned from the University, a newspaper reporter asked for a list of his discoveries. He was told that there were many important ones and gave among others the names of Doctors Novy, Huber, Warthin, Edmunds and Weeler.

Among my pleasantest memories are those of a visit to us in Flint with his charming wife and three sons, all later to be distinguished in medicine. The family was on the way to Northern Michigan where apart from the cares and cares of teaching, of court duties and medical practice, he was accustomed to spend the summer months. Another choice recollection is of a reception at Oak Grove to Dr. Sawyer, President of the State Medical Society. Witty, versatile in story telling, he was at his best on this occasion and those who were privileged to remain late will not forget his contribution to the entertainment of the company, one of whom in sheer hysterical glee slipped from a chair to the floor.

Neither can I forget an afternoon's drive, to which he invited me, about Washington. Its history, its topography, its monuments were completely familiar to him. This was during the late war. What a fine soldier he was! How much the coun-

try is in his debt for meritorious service during this and the earlier embroilment of 1898!

His thrilling experiences under fire in the battle of Santiago, his contention with yellow fever to which disease he himself eventually succumbed, the beneficent and far-reaching results in conservation of soldier life, attained by the Typhoid Fever Commission in which he had membership, his record in the world war, his contributions to bacteriology, chemistry, general medicine and sanitary science need not be detailed. Discussion of these would be supererogatory as well as necessarily fragmentary. Verily, just is the caption of a biographic sketch in the *Detroit Saturday Night*—"Dr. Vaughan, a Medical Pioneer."

He regretted the expansion of once fascinating cities like Detroit and Cleveland, which he would now "drive miles to avoid penetrating."

He "never read a lecture and seldom used notes," preferring to study the faces before him.

In "A Doctor's Memories" (1926) he avers:

"My life has been determined by heredity and environment. These are the fac-

tors that have molded my being, given direction to its development, marked out the course of its growth and set bounds to its activities. Had either been different from what it was, better or worse, I would have been different from what I have been and from what I am."

In the same year I wrote as follows: "If one had his life to live over, it would be an exact replica of the past—his reactions to his environment would be identical. If environment or reaction differed in any particular it would not be 'his life'".

My last communication from him was dated at Washington, April 27, 1927 and reads:

"My dear old Friend:

"I have just read your letter and your aphorisms. The former I greatly appreciate, and the latter I endorse in toto. Although I am now in hospital, I am hoping sometime in the near future to meet you in the flesh, when we will go over our common experiences.

"With love,

"Yours truly,

"Victor C. Vaughan."

TRACHOMA IS LEADING CAUSE OF BLINDNESS

The chief cause of the nearly two and one-half million cases of blindness existing in the world today is trachoma, Lewis H. Carris, managing director of the National Society for the Prevention of Blindness, stated on his return from a world conference on blindness held at The Hague.

This disease is found in nearly every part of the globe, but it is at its worst in Oriental countries. It is most prevalent in Egypt and along the borders of the Mediterranean Sea, in Palestine, China, the Balkan States, India, the hot sections of Brazil, and, in our country, among the inhabitants of the Appalachian and Ozark Mountain districts and among American Indians.

Trachoma is a highly contagious disease. The roller towel has been the cause of many epidemics of the disease in industrial plants. A common family towel is also a potent spreader of the disease among members of the same household. Poverty, crowding and unsanitary living conditions are important factors in the contraction and spread of trachoma.

The disease causes redness, painful inflammation and granular growths, looking something

like sago, within the lids. These irritate the cornea, producing ulcers and later scars. The scar formation may produce an opaque layer covering the pupil which results in loss of sight.

In individual cases the disease may be checked by proper treatment, but trachoma is so widespread that it cannot be entirely controlled until more is known of its cause. Dr. Hideyo Noguchi, working at the Rockefeller Institute for Medical Research, thought that he had found the organism or germ causing trachoma. Since his death the work has been continued, but further results have not yet been announced. Other investigators have considered diet a causative or predisposing factor.

The United States has for many years refused admission to immigrants showing symptoms of trachoma. The U. S. Public Health Service has been conducting extensive studies of the disease in the sections of this country where it is prevalent.

Other major causes of blindness are venereal diseases, babies' sore eyes, smallpox, glaucoma, congenital defects and accidents. — Science Service.

1929 A HEALTHY YEAR IN SPITE OF INFLUENZA

In spite of the influenza epidemic during the first three months, the year 1929 has been a healthy one so far, statisticians of the Metropolitan Life Insurance Company have announced. At that, the years 1928 and 1927 made better health records from January to September, the period which has just been surveyed for the current year. Heart disease is still the leading cause of death. Encouraging decreases occurred in

the tuberculosis and maternity death rates, while that for diphtheria was the lowest recorded in the history of the company. This is considered due to the intensive anti-diphtheria campaigns waged during recent years by various health departments. Cancer and diabetes showed increased death rates, and the mortality for automobile accidents increased by one-tenth over that of the same period for 1928.—Science Service.

A REVIEW OF LITERATURE RELATIVE TO ANIMAL EXPERIMENTATION
REGARDING THYMIC DISTURBANCE*

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The amount of animal experimentation directed toward elucidating the function of the thymus gland is quantitatively very much larger than the conclusions which may be drawn from it. The proven facts emerging from the following chronological review may be summed up in a very few sentences. The purpose of the reviewer is to emphasize only such truths, but to give at the same time a condensed statement of the work—acceptable and otherwise—from which they have emerged.

For about eighty years the investigation of thymus function proceeded almost entirely by the method of operative removal from animals, followed by observation as to the results. The earliest experiments those of Restelli¹ in 1845, followed this method. He operated on 98 sheep, dogs and calves. Owing to the severity of the operation only six animals survived for observation purposes, and from these he was able to draw no conclusions. Friedleben² followed him in 1858, removing the gland from goats and dogs, and in some cases removing the spleen as well. His method consisted in incising the left sternomastoid muscle, tearing through the fascia, and pulling the gland out through the opening. He usually produced a left-sided pneumothorax during the process. One of his dogs showed changes in the long bones—a widening of the marrow at the expense of the cortex, and a diminished regidity. He did not feel this an important enough finding to list it among his conclusions, which were that the thymus alone was not essential to life, but was so in conjunction with the spleen. The importance of the thymus, he felt, had to do with blood formation, nutrition, and growth. He noted that his operated animals developed voracious appetites, and grew faster than their controls. It is doubtful if his thymectomies were complete.

The subject then rested until 1893, when Langerhans and Saveliew³ reported results on rabbits and dogs. To Friedleben's operative method they contributed the important idea of controlling their experimental animals with others from the same litters. Their animals showed no important changes. Tarulli and LoMonaco^{4,5}, in 1894 and 1897 reported results on dogs and chickens. The important findings in their observations were: retardation of growth for two months, but at the same time abnormally increased appetite; permanent

shortening and coarsening of the hair, and transient anemia and leucocytosis. They noted particularly in their chickens that the results were more pronounced when operation was done at an earlier age.

At about this same period we have the work of a number of investigators on the frog—an animal chosen because its thymus was thought to persist with undiminished function throughout life. Abelous and Billard⁶, and Camia⁷ on the one hand decided from their work, that in the frog the gland was absolutely essential to life; but Vincent⁸, Ver Eecke⁹, Hammar¹⁰, Pari¹¹, and Adler¹² convincingly disproved these findings, showing that the misleading results of the former workers came from improperly controlled environment. One finding which emerges from this work was that of Adler—that in the thymectomized frog the testes and thyroid became enlarged, with diminished colloid in the latter.

Carbone¹³, in 1897, Ghika¹⁴, in 1901, Cozzolino¹⁵, in 1903, and Sinnhuber¹⁶, in 1904, all attacked the problem, using for experiment rabbits, dogs and cats. The two former give no important findings. Cozzolino reported what he thought were rachitic changes in the bones of two uncontrolled thymectomized rabbits, but Sinnhuber could find no relation between the gland and calcium metabolism.

The question of the relation of the thymus to the testes appears again in the studies of Vincent⁸, and Paton and Goodall¹⁷, who showed what they believed to be an antagonism between these organs in sexually immature animals. In the young animal the removal of either element appeared to cause a hyperplasia of the other.

Park and McClure¹⁸, who are painstaking critics of all literature on thymectomy, look with suspicion on the work of Bracci¹⁹ and Fischl²⁰, on rabbits, dogs, goats, and chickens. Both published papers in 1905. Bracci found a beautifully exact relation-

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ship between the thymus and calcium metabolism—the excretion of that element being much greater in thymectomized animals. Fischl found no differences in healing of artificially produced fractures in thymectomized and control animals.

The work of Basch²¹ was published in five papers, from 1902 to 1908. He developed a new operative thymectomy in the dog. He dissected down to the sternum, divided that, exposing the thymus, and dissected out the gland from above downward. In general, he found that if the thymus be removed from a puppy in the third or fourth week of life there follow within two or three weeks a softness and flexibility of the long bones, less calcification, with wider epiphyses, and a broader, more wavy epiphyseal line. Such conditions usually disappeared five or six months after thymectomy. Moreover, he also noted changes in nerve conduction and in some cases tetanic convulsions in these animals. He concluded that the thymus was not essential to life in the dog, but had an important function concerned with calcification and the growth and development of bone; and also was in important relationship with the parathyroids. Park and McClure, who carefully examined his work, believe many of his conclusions to be unjustified. For example, they were able to produce exactly similar bone changes in a normal puppy caged and fed as Basch's thymectomized animals were.

Soli's²² experiments in 1906, 1909, and 1910, on chickens, rabbits, and guinea pigs, are unimportant except for one interesting finding. Removal of the thymus from hens (which seem to have been aged one year or more) was followed by a period of four to eight weeks in which the birds lay eggs with extremely thin shells, or with no shells at all. His conclusion was that the thymus gland in some way enable the birds to absorb and utilize calcium for the shell.

In 1908, we find MacLennan²³ contributing a new operative method in which the sternum is entirely removed, and showing that young rabbits and cats seemed absolutely benefitted in health and growth by thymectomy. His animals showed mild changes in the bones; their thyroids were smaller, paler, and more cellular than those of controls. He is the first to advocate the operation as a therapeutic measure.

Sommer and Florcken²⁴ observed a reduced calcium content in the bones of thymectomized dogs and kittens. Ranzi and

Tandler²⁵ in 1909 introduced the use of artificial respiration in their thymectomies, but their work is not otherwise important.

The publications of Klose and Vogt²⁶ up to the year 1914 equalled the combined output of all their predecessors. Their results were accepted as highly important at the time but it may be said before commenting on them that they were later entirely disproven by the work of Park and McClure¹⁸. These authors not only convincingly refute the arguments of Klose and Vogt, but actually disprove their results by repeating their experiments. Therefore, only a very brief statement of Klose and Vogt's work is necessary here. Their thymectomies on dogs of less than ten to fourteen days of age were followed by a regular sequence of events: (1) A "latent period" of two to sixteen weeks, in which nothing happened; (2) a stage of adiposity" of two to three months; (3) A "stage of cachexia" during which there was general debility, and changes in consciousness and intelligence referred to as "thymic idiocy." Finally there was coma and death in three and a half to seventeen and a half months after the operation. In older dogs these changes were either very much prolonged, or did not follow thymectomy at all.

Klose and Vogt reported extremely marked skeletal changes in their animals, such as general shortening, softness, multiple fractures, irregular epiphyses, decrease in osteoid and in calcium content. The spleens of their animals underwent characteristic changes of hypertrophy followed by hyperplasia. Splenectomy combined with thymectomy markedly accelerated the train of post-thymectomy symptoms described above. A hypertrophy of the thyroid, genital glands and pancreas also followed their thymectomies.

Finally they put forth a theory of thymus function as follows: The thymus in fetal and post-fetal life is the chief organ of "nuclein synthesis." Its removal allows phosphoric or nucleic acid to increase in the blood, causing a phosphoric acid acidosis. This acidosis gives rise to the bone and nervous system changes. The spleen may take over thymus function when the thymus involutes.

The work of Matti²⁷ at the same period went still further. Although he reasoned from results on only one-half his cases (results in the other half having been entirely negative) and although much of his work was quite contradictory to that of Klose he states that he produced bone

changes by thymectomy almost exactly simulating those of rickets. He also found hypertrophy of the adrenal medulla, the thyroid, pineal and pancreas, and increase in the Malpighian bodies of the spleen. The death which followed thymectomy in his positive cases convinced him that the gland was essential to life.

Klose²⁹ was so much impressed by his work that he altered some of his earlier published work, said that the bone changes shown by his animals must have been rickets, and withdrew his theories of spleen and thymus interaction. He still held to his theory of "nuclein synthesis," but he never had anything but speculation to support this.

Passing over the work of Gebele²⁹, which is unimportant, we come to that of Hart and Nordmann³⁰. They performed a series of experiments on the dog, using the older operative measures, and a new one in which the first to sixth ribs of the left side were cut near the sternum, and the latter lifted outward, giving a very good exposure of the thymus. In their earlier work they found some changes in growth, vigor, the testes and the hair. They never found bone changes. Gradually Nordmann³¹ perfected his technic. Finally he was able to remove the thymus from animals of eight litters in the second week of life with absolutely no results pathologically or symptomatically. Moreover, microscopic examinations done at autopsy later proved that his thymectomies were complete. He was the first investigator to question the work of Klose, Vogt and Matti, and suggested that the environment and care of their animals may have produced the changes thought by them due to thymus deprivation.

The work of several investigators of about this time must be briefly mentioned. Paton³² concluded from work on the guinea pig that in this animal the thymus and testes each stimulated growth independently. Halnan and Marshall³³ failed to confirm this work. Lucien and Parisot³⁴ showed in thymectomized young rabbits effects on growth, the bones and the spleen somewhat similar to those of Klose and Vogt. Fulci³⁵ found that rests of thymic tissue left after incomplete thymectomy undergo histologic regeneration in rabbits, dogs and cats. Magnini³⁶ reported cachexia and death following thymectomy in very young rats, while there were no symptoms following the operation in older ones. The symptoms and death in his younger animals were prevented if he in-

jected thymus substance. However, in 1914, two years later, his results were disproved by the more careful work of Pappenheimer³⁷. His rats, operated at less than three weeks of age and later proved to be entirely thymus-free, showed no changes whatever.

In spite of Pappenheimer's work just described, Flesch³⁸ published in 1915 (from the same clinic in Frankfort where Klose had worked) results of experiments on the rat in which he proved by somewhat liberal interpretations that the thymus is essential to life in the rat.

The disproof of earlier work continued. Renton and Robertson³⁹, after negative results on guinea pigs and rabbits, performed further very important experiments in the dog, reported in 1916. Their thymectomized animals underwent a series of changes very similar to the profound disturbances reported by Klose and Vogt. However, these changes were present to an equal extent in their control animals. Moreover the animals—operated and control—which developed the severest symptoms were those which had been allowed the least exercise.

Following the work of Park⁴⁰ in 1917 which simply reports the impracticability of thymus experimentation on the guinea pig we come to the excellent and important studies of Park and McClure on thymectomy in dogs. The importance and completeness of their work may be judged from the fact that since its publication in 1918 there has been almost no further attempt at thymus experimentation by operative removal. Park and McClure¹⁸ began with an exhaustive and critical study of all the work of their predecessors. They then thymectomized seventy-five controlled dogs, using the standard method of dividing the sternum in the midline. They examined serial sections of the tissues from the animals at autopsy to prove the completeness of extirpation. They observed their animals with regard to effects of thymectomy on life, on the hair, teeth, contour of the body, muscular development, strength, activity, appetite, the bones and the organs of internal secretion. The results were absolutely negative in any of these respects with two very minor exceptions. They declare that a very small percentage of their animals showed changes indicating that the possibility of retarded development and delayed closure of epiphyses can not be excluded absolutely. Also they admit that well marked changes in the organs of internal secretion might

have occurred in the period immediately following thymectomy which was not covered by their experiments.

A review of literature similar to that given by Park and McClure was published by Blatz⁴¹ in the following year. Though he does not mention their work his conclusions are similar. Blatz also took up the work on the feeding of thymus extract done by Gudernatch⁴², Uhlenhuth⁴³, Hoskins⁴⁴, and Swingle⁴⁵. From a summary of all the literature on the relation between the thymus and the other organs of internal secretion Blatz could only conclude that "the only relation worthy of consideration is that between thymus and testis . . . but more evidence is necessary to make this inter-relation conclusive."

For the decade from the publication by Park and McClure to the present, practically all the work concerns the feeding or injection of thymus substance, or the removal of other organs with subsequent study of the effect on the thymus. For example, Downs and Eddy⁴⁶ injected into young rabbits a large number of increasing doses of thymus extract, killing them at the end of the period. The results were a slight decrease in body weight, increase in weight of thyroid and spleen, and decrease in that of thymus.

Romeis⁴⁷ at first reported in 1921 that he could transform weak and deformed tadpoles into healthy normal ones by feeding with an extract of calves' thymus, but in 1926 published further work under changed conditions, which showed more or less opposite results. In these latter animals—tadpoles and rats—feeding of thymus alone caused restricted growth, development of abnormalities, smaller bones, hypoplasia of thymus and lymph glands, and marked testicular hypoplasia. These changes did not occur if a high vitamine diet was fed with the thymus. Demel⁴⁸ reported that, although thymus feeding produced no changes, the implantation of the gland into young rats caused more rapid growth of bones and general maturity of the animals.

Riddle⁴⁹ has published three reports on the thymus in pigeons, which confirm Soli's earlier results of extirpation of the gland in the hen. Riddle found that pigeons which lay soft-shelled eggs—and which were later proved at autopsy to have very much involuted thymus glands—could be made to lay normal eggs by thymus feeding. He suggests that the thymus is not essential to individual life, but by assisting in the formation of proper egg

coverings is essential to the life of the race. It is puzzling that he finds thymus involution in birds beginning normally three months before the egg-laying period.

The interesting experiments of Jaffe⁵⁰ on the effect of suprarenalectomy on the thymus in the rat, were exactly confirmed by those of Marine, Manley and Bauman⁵¹ in 1924. They included also the effects of thyroidectomy, gonadectomy, and splenectomy on the thymus of the rabbit. Their results—which are most important—may be condensed as follows: 1. Thyroidectomy hastens while gonadectomy delays thymus involution. 2. Suprarenalectomy not only delays involution of thymus and lymphoid, but may cause their regeneration. Thyroidectomy prevents this reaction, even after combined suprarenalectomy and gonadectomy. 3. Suprarenalectomy and gonadectomy combined are a more powerful stimulus to thymus and lymphoid regeneration than either of these alone. This regeneration persists in the rabbit until regeneration of interrenal glandular tissue corrects the physiological defect. The syndrome thus experimentally produced resembles status thymico-lymphaticus in children, and is believed to depend on a partial loss of interrenal and sex glands rather than of chromaffin tissue. (The interrenal tissue in the rabbit is analogous to the cortical part of the adrenals in man.) 4. The thymic and lymphoid hyperplasias of childhood are believed to be manifestations of a functional underdevelopment of the interrenal and sex glands of varying intensity.

This represents perhaps the most significant of the later studies. There are a few other reports yet to be mentioned, including studies of thymus substance in relation to muscle tissue. Scheer⁵² found that an emulsion of thymus added to muscle cells causes a hydration of the cells similar to the action reported by Funk for his growth vitamine. Held⁵³ found that injection of thymus extract was a stimulus to fatigued muscle in dogs. Scheer⁵⁴ later reported that hypervitaminosis in rats produced greatly enlarged thymus glands, and suggested that a too high vitamine diet may be the cause of status thymico-lymphaticus in children. A further interesting work of Scheer and Bechdolt⁵⁵ showed that tadpoles in water containing thymus extract quickly succumbed to an increased alkalinity of the water, but were able to withstand a considerable acidity. But in the presence of thyroid extract acidity was quickly fatal while alkalinity was not. The

two glands would then seem to be of opposite nature in a bio-chemical sense.

Another recent experimenter on the relationship between these two glands was Krizenecky⁵⁶. He found that pigeons made hyperthyroid by feeding with thyroid extract lost weight rapidly, while others made hyperthymic in a like manner lost weight slowly. If he then fed his hyperthymic birds with thyroid as well, they lost only slightly more weight than the purely hyperthymic birds did. From this he concluded that there is an antagonistic action of thymus and thyroid on body weight.

There has been one further study on the effect of thymus on bone fracture healing. Glaessner and Hass⁵⁷ reported, with very few details, experiments on human cases and on cats. In cats (number of cases not stated), and in men (two cases), they found that a more rapid callus formation followed the injection of thymus extracts. Also, in artificial fractures in cats, thymus extract produced more rapid healing than parathyroid substance.

To draw any certain conclusions from all of this experimentation requires that much of the extirpation work be disregarded. Time and again there appears in these publications work which disproves that of preceding writers, or which is improperly interpreted. In short, the only answers which the results up to and including those of Park and McClure give to the question, "What is the function of the thymus?", are as follows: First, the gland seems important in birds in providing proper inorganic salts for the shells of eggs. Second, there is a bare possibility that it aids in the formation of bone. Third, it may be interrelated with the testes and other glands of internal secretion.

The results of experiments since that time show certain further facts. Implantation and feeding of thymus produce more rapid bone growth and stimulate callus formation.

Feeding of thymus alone causes testicular hypoplasia, thymectomy perhaps causes testicular hyperplasia, and gonadectomy delays thymus involution—a combination of facts which would seem to indicate an antagonizing action between these two.

Injection of thymus substance causes slight thyroid enlargement, thymectomy causes thyroid hypoplasia, and thyroidectomy hastens thymic involution. This would indicate an antagonism though of a different type. One bio-chemical experi-

ment has also shown an antagonism of these two glands.

Suprarenalectomy causes thymic (and lymphoid) hyperplasia, which continues until increased interrenal tissue function counteracts it. As the interrenal tissue is analogous to the adrenal cortex in man, it appears that there is a third balance between adrenal cortex, thymus, and lymphoid tissue.

The thymus becomes hyperplastic after a diet too high in vitamins.

Thymus extract causes hydration of muscle cells, and acts to decrease muscle fatigue.

From these confusing facts, one final conclusion may be drawn—that the function of the thymus gland has not yet been made entirely clear, and that there is need for much further experimentation before it will be.

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THE CLINICAL ASPECTS OF DISEASES OF THE THYMUS GLAND IN CHILDHOOD

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It is the purpose of this paper to discuss the clinical aspects of diseases of the thymus gland and to attempt to evaluate their importance in pediatric practice.

This is by no means a new subject. Practically, as long as anything at all has been known about the thymus, its possible relationship to clinical phenomena has been variously speculated upon. Ruhrah has called attention to a report by Plater in 1614, of a child who died, supposedly, from thymic suffocation. This is so striking in its similarity and shows so few points of difference from current reports that it is worth quoting. "The son of Marcus Peresius, five months of age, well nourished, with no previous illness, suddenly died from difficult breathing, suffocation. As the father had previously lost two sons from the same malady, and being desirous of knowing the cause, we opened the chest, at his request. We found the gland in the region of the throat as a large protruding tumor, one ounce in weight, spongy, fleshy and pendant, replete with veins, adherent by membranes to the largest ascending vessels adjacent to the throat; these being filled with blood and flowing into the struma, dilated it to such an extent that it compressed the blood vessels in the locality; in which manner I concluded the child was then suffocated."

Kopp, in 1824, was the first to describe symptoms of stridor as due to pressure of the thymus under the name of thymic asthma, but his work was largely refuted by Friedleben in 1858. This latter work was very exhaustive and concluded that pressure symptoms were impossible from the thymus. This view was generally accepted until the latter part of the nineteenth century.

Our modern interest in the thymus really dates from the work of Paltauf in 1889, at which time he described the condition known as status thymico-lymphaticus. He described certain similar characteristics in a group of young people dying suddenly from apparently insignificant causes, such

as bathing, minor trauma, nervous shock, anesthesia, etc. His work aroused a great deal of interest, which has continued in an active form up to the present time. During this forty-year period a great amount of clinical literature has appeared. Much of this consists simply of isolated case reports, and there are very few really scientific considerations of the subject.

Two decided trends of thought are apparent in this literature; that which ascribes any and all symptoms to the thymus gland and associates it with widely varying conditions; and that which denies its importance. The former trend is shown by authors too numerous to mention, while Friedjung in 1900, and Von Sury in 1908, have gone to considerable pains to deny the very existence of thymus pathology. More recently, Boyd, Greenwood and Woods, and Morse have published convincing papers on the negative side of the question.

The heterogenous nature of this literature is very striking and the conclusions drawn by different writers are of such a diverse nature as to make an analysis extremely difficult.

The fairly clear cut syndromes associated with disease of the thyroid, parathyroids, pituitary, gonads, pancreas and adrenals, are absolutely lacking in the case of the thymus.

Because of this lack of definite characteristics, widely varying points of view have developed among clinicians. Some strongly believe that the thymus is respon-

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sible for numerous commonly noted symptoms; others as emphatically reject it as a cause of disease; while the majority are quite uncertain as to its true clinical importance; hence this present discussion.

Before taking up the clinical phases of this question, certain points in anatomy and pathology, which have a direct bearing, should be briefly mentioned. A great deal of disagreement has prevailed upon the ability of the thymus to produce pressure symptoms. Probably the chief source of discussion and error has been the matter of determining the size of the normal thymus at different ages and under different conditions of health. This has recently been carefully studied by Scammon and Boyd elaborating upon the slightly earlier work of Hammar. These authors have pointed out that involution of the thymus occurs from two causes, age involution, and "accidental" involution. The latter occurs during acute illness and nutritional disturbances, and frequently develops with surprising rapidity and to a remarkable degree. This factor has not been adequately considered in determining standards of size in earlier works. Scammon has collected a series of 1,074 children who died from some adequate pathologic cause other than possible thymus disease, within 24 hours of the onset, and has established a normal curve.

He shows that the newborn's thymus weighs about 14 grams and that from that point steady increase in size up to about 35 grams takes place until the advent of puberty, when a gradual involution begins. Variations considerably above this normal have been observed by Boyd in children showing no evidence of thymus disease, with numerous glands over 40 grams in the first few years of life.

Another interesting point brought out by Scammon is the parallelism between thymus growth and involution and general lymphatic growth and involution. His work shows that these structures follow identical curves both in health and disease, which is a strong argument for the lymphoid character of the gland.

Pathologic changes in the thymus, aside from neoplasms and simple hyperplasia, have never been definitely demonstrated.

As to the physiology of the thymus, absolutely nothing beyond the stage of hypothesis is available. It has been linked in one way or another with many different functions, but almost all research of a scientific nature has given negative results. That it is not necessary to life has been

proved, but that it has definite function seems equally certain.

Disease of the thymus can be classified under four headings:

1. New growths.
2. Status thymico-lymphaticus.
3. Simple hyperplasia.
4. Disturbances of function.

Primary neoplasms of the thymus are quite rare, but are occasionally seen. They are usually sarcomas. The chief point of interest to us is that they frequently attain considerable size, extending both into the neck and mediastinum before producing serious respiratory or cardiac symptoms. One cannot help comparing the effects of these large, firm tumors with the supposed effects of the soft and much smaller hyperplastic glands.

The clinical picture of status-thymico-lymphaticus as described by Paltauf has not been materially altered by more recent writers. This is described as essentially a condition of young adult life and is characterized by certain physical traits, such as aesthenic habitus, pale delicate skin, scanty hair of feminine distribution, and rounded, smooth limbs. The patients are easily fatigued and are said to show an increased susceptibility to infections, especially meningitis, diphtheria and tuberculosis. They frequently are nervous and emotionally unstable, and according to some writers are commonly alcoholics and degenerates. At the Bellevue Hospital in New York, it is estimated that about 10 per cent of all autopsy patients present this syndrome, but that 22 to 25 per cent of the alcoholics, drug addicts, insane, epileptics and other degenerates belong to this group. At autopsy, in addition to the points noted, is found a general hyperplasia of all lymphatic structures, especially the mesenteric lymph glands, the thymus and the spleen. Hypoplasia of the aorta and cerebral vessels and of some of the more important viscera are also characteristic. Sudden death from apparently trivial causes is supposed to occur at times among this group of patients. This has especially been noted during swimming, following minor trauma, such as hypodermic injections, during anesthesia, and associated with sudden emotional states. The condition is seldom recognized before puberty, which would indeed be very difficult, since the pathology is supposed to be a persistence of normal infantile conditions into adult life. The most that could be determined in childhood would be an

excessive lymphoid hyperplasia, the characteristic hypoplastic conditions so definite in the adult not having had time to develop.

Death in these cases is not due to any mechanical effects of the thymus, but supposedly to disturbances in function or to intoxication. That the thymus plays any essential role in the syndrome is not maintained even by the most enthusiastic writers on the subject, the opinion being that it is only a part of the picture. It is interesting to note that the weights of most of the thymus glands taken from these cases fall within the limits of normal established by Scammon and Boyd. At least, it must be admitted that the entire syndrome is rather vague and broad in its scope. At the same time, the existence of such a picture has been noted by so many competent clinicians and pathologists that there can be little doubt that it occurs, but any relation to the thymus is extremely doubtful.

Simple hyperplasia of the thymus is the condition in which we are chiefly interested, because that is what is usually meant by thymus disease in children. The importance of this has been greatly emphasized in the last ten to fifteen years, and it has been called upon to explain numerous symptoms, especially in early infancy. The most dramatic of these symptoms is sudden death. A supposedly healthy child is found dead in bed. At autopsy nothing is found abnormal, except what in the opinion of the pathologist is an enlarged thymus. Or a child may die in the course of an anesthetic, during a convulsion, or following the injection of horse serum, with the same post mortem result. In this way the physician's conscience is relieved and the parents appeased, although the spirit of true scientific investigation may be offended. To quote from Warthin, writing on this subject in 1909, "In the case of infants found dead in bed the suspicion of 'overlying', either accidental or intentional, has been quieted by a diagnosis of lymphatic constitution, and the same diagnosis has probably been given somewhat hastily and upon inadequate grounds in explanation of sudden death in unexplained or suspicious circumstances."

More commonly, infants showing varying degrees and forms of stridor; cyanosis, either occurring in attacks or as a constant slight blueness about the mouth; dyspnoea; choking spells; or periods of apnea, are diagnosed as having enlarged thymus glands. Sometimes, even more general symptoms are ascribed to this condition,

such as irritability, increased susceptibility to infection, malnutrition, and a pale, pasty appearance of the patient.

If, in addition to these symptoms, the X-ray of the child's chest shows what the roentgenologist considers a widening of the thymic shadow, the diagnosis of enlarged thymus seems manifest. Especially convincing does the diagnosis appear, if after a series of deep X-ray treatments, the child becomes better and the symptoms disappear.

So common has the diagnosis of enlarged thymus become with some physicians that the possibility of its presence has been extended into the field of preventive medicine, so that in certain hospitals an X-ray of the chest is taken of every child to be given an anesthetic and of every new-born baby. In many cases where there have been absolutely no symptoms, but where there has been an apparent increase in the X-ray shadow, important operations have been postponed until deep therapy had been employed, and in a great number of new-borns who were perfectly healthy to all outward appearances the same procedure has been carried out. A prominent Michigan obstetrician has reported that in a series of his newborns enlarged thymuses occurred in 57 per cent of the cases. It is hard to believe that more than half of new-born babies arrive in the world with a definite pathologic condition.

Disturbances in the function of the thymus are, of course, entirely in the realm of hypothesis, since our knowledge of its physiology is still in the same state. Nevertheless, some writers have attributed sudden death and other symptoms to thymic dysfunction, either with or without hyperplasia. As Morse has pointed out, the symptoms in these cases are much more suggestive of adrenal insufficiency, of which we know a little, than of excessive thymus function, of which we know nothing.

In considering the differential diagnosis of enlarged thymus there are many things to be studied. There are many things capable of producing sudden death in early life which leave little for the pathologist to find at autopsy. Infants react so much more quickly and more violently to various conditions than do older individuals, that a fatal result may ensue before other symptoms or marked pathologic changes have developed. Overwhelming infections, sudden metabolic disturbances, anaphylaxis and a host of possible allergic reactions, endocrine dysfunctions, acute pois-

oning, and electrocution are some of the conditions capable of producing sudden death without leaving visible traces. Certainly they are all as rational as "thymic death," simply because no other explanation can be found and the thymus looks large.

Stridor, dyspnea and choking are much more likely to be produced by adenoids or other nasal obstructions, by adenitis, by defective development of the mandibular arch, by abnormal softness of the cartilage of the larynx or epiglottis, by congenital cysts, by papillomas of the larynx, by defects of innervation of the laryngeal muscles, and by inflammatory conditions within the larynx. Spells of cyanosis should cause a search for heart disease, atelectasis, or cerebral lesions, while a slight cyanosis about the mouth seems to be normal in many young infants when they are at rest. Periods of apnea certainly call for care in eliminating central nervous system trouble. An apprehensive appearance or conformation to any particular physical habitus is much too vague to be of any diagnostic importance in infancy.

Physical examination of the chest is of little value in determining the presence of an enlarged thymus. Very large glands should be palpable in the episternal notch, but accurate percussion is very difficult. When one considers how little change is produced in the percussion note of an infant's chest by large areas of pneumonia and considerable collections of fluid, it is evident that a mass weighing twenty to thirty grams lying in the mediastinum will be hard to define by percussion. Some physicians feel that they can percuss the thymus with considerable accuracy, but it is certain that the average physician cannot. It seems likely that if the same skill were shown in all of the phases of physical examinations and observation which is manifested by those who claim proficiency in percussing the thymus, that in most cases other conditions would be found to explain the symptoms.

Probably the X-ray is chiefly responsible for the great frequency with which enlarged thymus has been diagnosed in recent years. It is easy of application and tangible in its result, but exceedingly difficult in its interpretation. The variations which are within normal limits are hard to define. The changes in the shadow due to respiration are so marked as to give entirely opposite impressions at the different phases. Differences in the size and position of the heart, of the hilus lymph nodes

and other mediastinal structures, and even intra-abdominal changes can produce modifications in the thymus shadow. At best the X-ray shows nothing but the width of the gland, whereas, certainly the most important dimension in the production of pressure symptoms is thickness. Even the most expert roentgenologist cannot absolutely make a diagnosis of enlarged thymus from an X-ray film. At the Dallas session of the American Medical Association in 1927, DeBuys, Samuel and Borne, appearing before the section of Roentgenology and reporting a series of cases which they considered to have enlarged thymuses, made the following statement: "Up to the present, we have been unable to arrive at a definite standard as to the size, shape and position of the gland causing symptoms, some patients having all the effects of hyperfunctioning thymus, and on examination showing only a very slight enlargement, while other cases in the series, with marked enlargement of the gland, show no clinical manifestations." They conclude that the opinion of the man reading the plates as to whether the shadow is too large or not is the only criterion. In the discussion of this paper no issue was taken on this point, although the foremost X-ray men of the nation were present. From our personal experience we feel that the X-ray is of practically negligible importance in diagnosing enlargement of the thymus.

The diagnosis of thymic death is frequently made at autopsy when other conditions to explain the death are not found. Probably the chief source of error here has been the misunderstanding of what the normal thymus should be. Pathologists are accustomed to doing post mortems on children who have been sick for some time, and as has been previously pointed out, rapid involution of the thymus takes place during illness, so that the average pathologist has an erroneous impression as to its normal size. Boyd has shown that glands of forty and fifty grams are common in normal children dying accidental deaths, while many pathologists consider a gland over twenty grams abnormal. In many of the reported cases the gland was not even weighed, the pathologist merely stating that in his opinion it was enlarged. Pathologists in general seem to have the point of view that they must find a cause of death. A clinician will often be forced to say, "I don't know why this patient is sick," but a pathologist seldom says, "I don't know why this patient died;" although such must often be the case. So,

when in doubt, the diagnosis of thymic death is made.

In the early experience of this writer, the diagnosis of enlarged thymus was often made, although always with a dissatisfied feeling. Later, it became evident that many cases formerly so classified were due to other conditions until we began to seriously doubt the very existence of such a disease. During the last six years we have accumulated records in our office of over 15,000 Detroit children. While the question of thymus disease has been often considered and even made by pathologists at autopsy in certain cases, in looking over these children in retrospect, it is impossible to point to a single one and say absolutely, "this patient had an enlarged or diseased thymus." And there have been very few in which such a diagnosis merited serious consideration.

While it is not possible to deny that such a disease exists, it is our definite impression that as usually made, it is an alibi diagnosis. That is, it is made as a substitute for careful observation and thorough study. In most cases an adequate explanation will be found if searched for. Certainly the burden of proof rests upon those who make the diagnosis.

In this connection there is one point which should be mentioned in regard to

X-ray therapy. It seems like a very grave responsibility for anyone to subject a newborn or small infant to powerful, deep X-ray therapy on no more evidence than a supposedly widened thymus shadow. The possibility of injury to the thyroid, to the chromaffin tissues, to the myocardium, to other mediastinal contents, or even to the thymus itself, is so great as to make this a serious undertaking. We have observed one child with congenital stridor who had received a large amount of X-ray therapy which later came to autopsy and showed an extensive X-ray myocarditis. Moreover, the effects of such treatment may not be known until adult life is reached. We cannot deprecate too strongly the routine X-ray treatment of symptomless infants wholly upon the basis of an X-ray film.

In conclusion, we have attempted to discuss the various clinical aspects of the thymus gland as they apply to children. In our opinion there is exceedingly little evidence to show that the thymus plays any pathologic role. Certainly, it is so rare as to be practically negligible in its importance in pediatric practice.

It is an interesting point that many outstanding clinicians, who formerly felt that thymus disease was an important condition in childhood, have recently announced a change in their point of view.

EIJKMAN, HOPKINS SHARE NOBEL PRIZE IN MEDICINE

Two men who gave to the world the earliest knowledge of the all-important vitamins, Prof. Christian Eijkman of the University of Utrecht in Holland and Sir Frederick Gowland Hopkins, professor of biochemistry at the University of Cambridge, England, have been awarded the 1929 Nobel Prize in medicine.

Prof. Eijkman was the first man to produce experimentally a disease of dietary origin. In 1889, when director of the hygienic laboratory at Batavia, Dutch East Indies, he succeeded in producing polyneuritis in fowl by feeding them a diet consisting exclusively of completely polished rice. He had previously noted that this disease resembled closely the disease beri-beri

occurring in human beings. In both the human and fowl disease, the nerves show the same degeneration, and the symptoms are very familiar. In 1921 Prof. Eijkman was made a foreign associate member of the National Academy of Sciences here.

Professor Hopkins, in 1906, first demonstrated that an accessory food substance besides proteins, fats and carbohydrates was necessary for growth, reproduction and maintenance of life in animals. Since then he has done considerable research on the nature of these accessory substances, which we know by the name of vitamins. Professor Hopkins has been called discoverer of the vitamins.—Science Service.

STUDY VITAL ORGANS WITH X-RAY MOVIES

A normal human lung rids itself of foreign material by means of a peculiar rhythmic motion of the bronchial tubes, Dr. H. A. Jarre of Detroit told members of the Radiological Society of North America at the Toronto meeting. This discovery was made with the aid of an X-ray motion picture camera.

"The pictures we take are slow motion because the organic movement in the body will only tolerate a limited amount of X-ray energy," said Dr. Jarre in explaining the new machine, which is to be called the Cin-Ex camera. The pictures are taken at the rate of one to four seconds, while

the regular picture camera takes sixteen exposures per second.

The bodily organs which have been studied most intensively with the new camera are the bronchial tubes, kidneys, heart and large blood vessels, thymus gland, and stomach and intestines. An interesting cyclic motion of the kidneys was observed. Dr. Jarre reported that he and his associates discovered a peculiar rhythmic motion phenomenon of the bronchial tubes during breathing "so that in a normal human lung foreign materials and excretions as well as air are expelled by these movements alone."—Science Service.

PRESENT CONCEPTS OF ENLARGED THYMUS AND STATUS THYMICO-LYMPHATICUS—A REVIEW OF A DECADE'S EXPERIENCE*

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The question of thymic enlargement and status thymico-lymphaticus has been a prolific source of controversy for many decades. The continual appearance of new and frequently divergent ideas has served only to make difficult the formulation of an harmonious and clear-cut conception. In an attempt to arrive at a satisfactory understanding of a much-debated question, it would seem valuable to reappraise accumulated experience in order to determine whether certain beliefs that have been held can be reaffirmed or to what extent they might need revision. With this in mind a review of a decade's experience with these conditions in the Pediatric Service at the University hospital was attempted.

In the present study 335 available case records of enlarged thymus since 1920, with and without clinical manifestations, were reviewed, this series including a group of 25 necropsy cases. In addition, 34 cases of pylorospasm and pyloric stenosis were studied for their possible relationship to enlarged thymus and status thymico-lymphaticus. The diagnosis of the cases of enlarged thymus without symptoms, numbering 248, was made on the basis of roentgenological evidence. Sixty-one cases had such symptoms as cyanosis, dyspnea, breath-holding, stridor, dysphagia, cough, and convulsions; all but six of this group had confirmatory roentgen-ray evidence of enlarged thymus.

INCIDENCE

There seems to be considerable discrepancy as to the incidence of enlarged thymus without symptoms. In 1922, Greenthal¹, studying a series of 2,000 consecutive admissions to the Pediatric Service at the University hospital, found that thymic enlargement was diagnosed in 90 patients (4.5 per cent). Eighty-seven cases gave neither history nor symptoms of thymic involvement. Of the series of patients who had roentgen studies of the thorax, enlargement of the thymus was noted in 25.6 per cent. Blackfan and Little² found roentgen-ray evidence of enlarged thymus in 48 per cent in a series of 60 infants. Liss³, in a series of 119 patients, found that 42 per cent at birth showed an enlarged thymus. On the other hand, Perkins⁴, in a roentgen-ray study of 500 cases, found only 25, or 5 per cent, with definite

thymic enlargement. Several explanations for this variation can be offered. First, this discrepancy seems to be due to the wide variation in the age of the groups studied. In general, the incidence of thymic enlargement, as determined by roentgenography, seems to follow the standards established by anatomical studies. The younger the age of the group studied, the greater the incidence of thymic enlargement. Secondly, the type of cases studied will sometimes influence the incidence of thymic enlargement. As Greenthal¹ has pointed out, patients with congenital defects and malformations are more prone to have thymic enlargement than are other patients. In his series of 90 patients, 33 (39.6 per cent) had such conditions. In this present series of 335 cases, 112 (33.4 per cent) had congenital defects or malformations, 98 (29.3 per cent) of which were harelip and cleft palate cases. One can readily appreciate how a reported incidence can be influenced by certain types of cases gravitating towards a particular clinic, such as the unusually large number of patients with harelip and cleft palate which we see at the University clinic. As regards thymic enlargement with symptoms, the incidence undoubtedly is much smaller as compared with that of enlarged thymus without symptoms. In the present series the ratio was approximately one to four.

RELATION OF ENLARGED THYMUS TO STATUS THYMICO-LYMPHATICUS

In the literature, the consideration of enlargement or hyperplasia of the thymus as a separate condition is a common one. Yet, as such, divorced from its usual association with the thymico-lymphatic constitution, it seems to be a relatively infrequent condition. Warthin⁵ states that no line of separation can be drawn between the occurrence of thymic hyperplasia as a separate condition and that associated with

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hyperplasia of the lymph nodes. Indeed, in reviewing all the necropsy cases of thymic enlargement and status thymico-lymphaticus in infants and children during the period of the present study, not a single instance was to be found in which thymic hyperplasia was not associated with the general picture of status thymico-lymphaticus. In each of the 25 necropsy cases studied, thymic hyperplasia was found together with general lymphatic hyperplasia, associated with exhaustion of the germinal centers, and hypoplasia of the heart, aorta, and adrenals—the anatomical stigmata of the thymico-lymphatic constitution. This seems of interest clinically, for it leads one into an impression that in making a definite diagnosis of thymic enlargement, one is, in all likelihood, recognizing at the same time a definite constitutional anomaly—status thymico-lymphaticus—a designation which then should carry with it the realization of all the attending possibilities in the child for anaphylactic or surgical shock, for diminished resistance to infection, and in general for inadequate adjustment to the ordinary exigencies of its environment.

MECHANISM OF THE PRODUCTION OF THE SO-CALLED THYMIC SYNDROME

It was natural, ever since Plater⁶ described the first post-mortem case in 1614, that sudden, dramatic death, associated with the clinical symptoms of suffocation and necropsy evidence of thymic enlargement, should have been regarded as death produced by the mechanical effects of pressure. This conception, save for the exception taken to it by Friedleben⁷ went unchallenged up to the latter part of the nineteenth century. At this time, Paltauf⁸ formulated his conception of status thymico-lymphaticus, suggesting that the thymus plays only a secondary role. Since then, other theories have been brought forward to indicate that the thymus may not be the sole factor in the production of the clinical picture attributed to thymic enlargement.

From the anatomical point of view, the factor of mechanical pressure in the production of thymic symptoms seems a strong possibility. Enclosed within a space of about 2 c.m. (the so-called critical space of Grawitz) between two unyielding walls, the sternum anteriorly and the vertebral column posteriorly, lies the thymus overlying the anterior surface of the trachea. Other compressible structures are also in close relation to the thymus:

the superior vena cava, the left innominate artery, and the recurrent laryngeal nerve. An increase, therefore, in the antero-posterior diameter of the thymus would appear capable of bringing about the symptoms described. Yet, it is curious how infrequently actual evidence of marked pressure by an enlarged thymus on the structures of the superior mediastinal space is observed post-mortem. Of the 25 necropsy cases studied, evidence of tracheal compression was found only in two cases. The instances reported in the literature seem to carry little doubt of tracheal compression by an enlarged thymus. The fact that surgical removal and the reduction in size of the thymus by roentgen therapy may give prompt relief of symptoms lends strength to the view of the mechanical effects of enlarged thymus. Warthin⁹ believes that the reason more cases of enlarged thymus do not show evidence of tracheal compression at autopsy can be explained by the disappearance of the signs of compression after death. He cites the experiments of Hedinger⁹, who by a special technique was able to demonstrate tracheal compression of the thymus in cases in which the size of the thymus does not exceed the limits of weight and dimension usually regarded as normal. If this is true, then any method that can reveal, in the antemortem state, evidence of encroachment on the mediastinal structures by an enlarged thymus would be of great importance.

Recently, use has been made of lateral roentgenography as a method of determining evidence of enlargement of the thymus in its antero-posterior diameter. In the lateral films that are taken, particular attention is paid to evidence of tracheal compression. In the present series, 78 patients had films taken with the patient in lateral position, in addition to those taken in the usual anteroposterior projection (Table I). Of this number 47, or 60.3 per cent,

TABLE 1

Evidence of Tracheal Encroachment by Enlarged Thymus as Revealed by Lateral Roentgenography

	Number of Cases Studied	Number of Cases Showing Tracheal Encroachment	Number of Cases Showing Enlargement in Both Antero-Posterior and Lateral Projections	Evidence of Thymic Enlargement in Lateral Projection Alone
Cases Without Symptoms	54	29	24	5
Cases With Symptoms	21	15	12	3
Necropsy Cases.....	3	3	3	.....
Total	78	47	39	8

showed evidence of encroachment on the trachea by an enlarged thymus, as evidenced by a decrease in the lumen, deviation or displacement of the trachea. It is interesting to note that the proportion was larger in the group presenting clinical symptoms as compared with that showing no symptoms but only roentgen evidence of thymic enlargement. Only three of the necropsy cases studied had had lateral films taken. All of these showed some evidence of tracheal encroachment. A comparison in these cases of the lateral films and post-mortem findings in an attempt to correlate ante-mortem and post-mortem evidence of tracheal compression does not permit of any exact deductions, since all these cases received roentgen therapy with the probability, therefore, of a consequent reduction in the size of the thymus.

It is simpler to understand the production of symptoms by an apparently obvious local cause. This applies particularly to thymic enlargement and explains why attention has been focused on the thymus in the clinical picture attributed to the mechanical effects of its enlargement. That the question is a much more complex one is indicated not only by the inclusion of thymic enlargement as a feature in status thymico-lymphaticus, but also its association with other constitutional deviations and endocrine defects.

Of great significance is the association by Eppinger¹⁰ of vagotonia with enlarged thymus and status thymico-lymphaticus. He regards vagotonia as a clinical expression of an inferior constitutional make-up and notes the frequency of the occurrence of enlarged thymus and status thymico-lymphaticus in vagotonic individuals. This observation bears still further significance from the post-mortem coincidence of adrenal pathology and status thymico-lymphaticus. Since lymphatic overdevelopment is also an important feature in Czerny's exudative diathesis, and since in the latter condition vagotonic manifestations are frequent, a relationship between enlarged thymus, status thymico-lymphaticus, vagotonia, and the exudative diathesis seems probable.

As regards the relationship of thymic enlargement and vagotonia, Aldrich¹¹, in a recent clinical analysis, concludes that most of the symptoms regularly attributed to thymic enlargement can be explained as vagotonic phenomena, and that one or two are due to pressure of the gland itself. A large proportion of his cases had evidence

of pylorospasm, which is regarded as a clinical manifestation of vagotonia. This association had previously been reported by other observers¹². As further proof that this association of pylorospasm and thymic enlargement is not merely a casual one, are the reports of cessation of the vomiting of pylorospasm following roentgen treatment for the associated thymic enlargement¹³.

Thirty-five cases of pylorospasm and pyloric stenosis occurring within the ten year period selected for study were reviewed; 25 were cases of pylorospasm and 10 pyloric stenosis. Roentgen examination for thymic enlargement was performed on 13 cases, 5 of which showed evidence of enlargement. Three of these 5 cases with evidence of enlarged thymus and pylorospasm also had clinical symptoms of the thymic syndrome. One case of pyloric stenosis with a past history of thymic attacks died with what was believed to be thymic paroxysms, and at necropsy showed a thymico-lymphatic constitution, but no evidence of tracheal obstruction. In the entire series of 370 cases, only 10 were found who had an associated eczema. It is possible that the incidence of vagotonic symptoms in patients with evidence of enlarged thymus would have been larger had this relationship been considered earlier and an especial study made of this point.

Additional clinical evidence of an intimate relationship of adrenal insufficiency and status thymico-lymphaticus is offered by the observation made by MacLean and Sullivan¹⁴ of a pronounced hypoglycemia in three fatal cases of thymic convulsions. In the cases of the present study that came to necropsy, the significant finding of adrenal hypoplasia associated with status thymico-lymphaticus was almost a constant finding, a coincidence which was reported several decades ago by other observers¹⁵.

RELATION OF ENLARGED THYMUS AND STATUS THYMICO-LYMPHATICUS TO ROENTGEN THERAPY

We are accustomed to regard the possibility of surgical shock and sudden death during and following operation in infants and young children with evidence of thymic enlargement as a serious one. In an attempt to minimize any such possibility we have adopted a strict routine of pre-operative roentgen therapy of all children under 6 years showing evidence of thymic enlargement. As a result, many roentgenograms have been taken, and a large number of infants and children with enlarged thymus have been treated.

Has the caution and concern with which we have regarded enlarged thymus in infants and young children scheduled for operation been justified by experience? In the present study, only 8 cases of post-operative death could be found among those who had received prophylactic treatment for enlarged thymus. Of these, 5 were harelip and cleft palate cases. Six of the 8 cases mentioned came to autopsy: 5 showed a thymico-lymphatic constitution; the other showed a subarachnoid hemorrhage at the base of the brain, icterus neonatorum, and roentgen atrophy of the thymus. This number seems significantly small in comparison with the large number of cases that have undergone surgical procedures over a period of approximately 10 years.

A special study was made of the cases of harelip and cleft palate, since they constitute a large percentage of infants and young children that come to operation in our clinic. This group, in addition, makes an ideal one in the study of the value of prophylactic roentgen ray therapy, since children with congenital malformations are frequently found to have stigmata of the thymico-lymphatic constitution.

Since 1925, 352 cases of harelip and cleft palate had pre-operative roentgenograms taken. Seventy-five, or 21.3 per cent, showed evidence of enlarged thymus. Approximately 200 operations were performed on these 75 cases. There were 13 deaths, or a mortality of 3.7 per cent in the entire group, 6 deaths occurring in the group having enlarged thymus. Five of these (mentioned above) died post-operatively; the sixth was found dead prior to operation.

So far as the effects of treatment of the cases brought to the clinic with actual symptoms are concerned, consistently good results have been obtained. Disregarding those children with thymic enlargement whose death was associated with operations, or whose death could be explained by some obvious different cause, only one case could be found that died in spite of roentgen-ray therapy.

It is difficult to understand how roentgen therapy produces its beneficial effects if one accepts the view that mechanical pressure by an enlarged thymus is the exception rather than the rule. If its beneficial effects are not due primarily to a reduction in the size of the thymus, such as occurs following roentgen-ray treatment, then we have as yet no satisfactory explanation how the therapeutic effect is brought

about. But irrespective of one's conception of how the symptoms are produced—and our knowledge at the present time is certainly incomplete—the value of the roentgen therapy is a tangible and outstanding fact.

SUMMARY AND CONCLUSIONS

A review of a decade's experience with enlarged thymus and status thymico-lymphaticus impresses upon one that there is still much to be learned before a satisfying conception of their cause and effects can be achieved.

In the light of the present knowledge, the view of simple mechanical pressure by an enlarged thymus cannot be regarded as the sole factor in the production of the so-called thymic syndrome, although it is conceivable and probable that enlargement, in a mechanical way, does play an important role. Enlargement of the thymus and symptoms attributed to it seem to be the secondary expression of a more fundamental process.

The coincidence of thymic enlargement, status thymico-lymphaticus and adrenal pathology seems of significance and may prove of great importance in the ultimate understanding of the clinical picture associated with enlarged thymus and status thymico-lymphaticus.

In spite of the imperfect state of our present knowledge of enlarged thymus and its associated conditions, the use of roentgen diagnosis and therapy is indispensable.

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CIN-EX CAMERA STUDIES OF THE THYMUS IN INFANTS AND CHILDREN

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The Cin-ex camera recently developed by my associate, Dr. Hans A. Jarre, marks the beginning of a new method of studying the motor functions of internal organs in health as well as in disease. By using this apparatus it is possible to make as many as four X-ray exposures a second on a roll film, but it has been found by trial and error process that two or possibly three exposures per second is sufficiently rapid to record most of the actual movements of the internal organs. In our studies on the thymus gland some were made very rapidly, while others were taken much slower, the average being about five exposures in two seconds.

The roll film is about 20 feet in length, permitting us to record as many as 30 roentgenograms in from 10 to 20 seconds. A few of the films were actually made in 10 seconds. The exposure time is so rapid that the movement of respiration does not even blur any of the finer details of the lung fields. During this rapid examination we have records of the heart in diastole and in systole and of the chest in inspiration and in expiration and in many of the intermediate phases. An analysis of these films, most of which were made in the antero-posterior, a few in the postero-anterior and lateral positions, will follow a little later.

This new method of studying the motor functions has revealed that many of our former X-ray interpretations of pathological change, as based on a single film or a group of films in two or three positions, are nothing more than a physiological motor function, perhaps in a very exaggerated physiological state. Hence, in the light of our new experimental findings we are forced to abolish, as being partially or totally erroneous, some generally accepted fact; and by the same token we are able to prove that some of our preconceived ideas, which have been doubted simply because clinical findings and teachings were more favorable to the old idea, have scientific facts on which to base our new interpretations.

NOTE:—We are indebted to Dr. Hans A. Jarre for the use of the Cin-ex camera which has made this study possible, as well as to Miss B. Kaiser who helped us secure material for the study.

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**Dr. R. Q. DeTomasí graduated from the Detroit College of Medicine in 1921. He is engaged in general practice and is a member of the Staff of Grace Hospital.

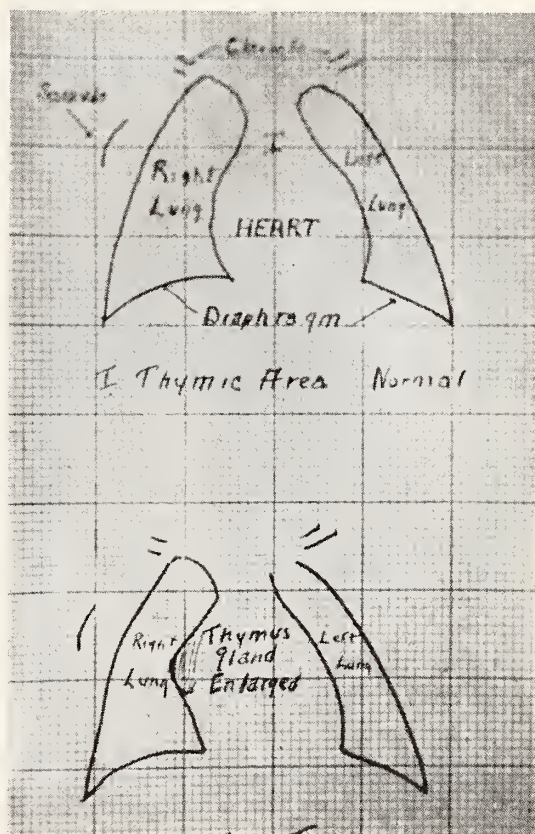


Figure 1.

Figure 1 consists of actual skeletal tracings of the heart mediastinum and lung fields as outlined by the inside of the thoracic cage.

The various structures of Figure 1 are labeled and, given along with Figure 2, explain the grouped skeletal outlines of Figure 3 and 4.

For example, the thymus shadow as shown on one or two or three X-ray films cannot be accepted as indicating the true state of enlargement or hypertrophy and, conversely, a set of films after a single or series of therapeutic X-ray exposures, though the thymic outline is smaller, does not necessarily indicate that the gland has been reduced in size. The Cin-ex camera enables us to obtain the individual roentgenogram so rapidly that every phase of motor movement can be recorded upon a 20 or 30 foot roll film. In fact, in addition to the normal cardiac and respiratory

phases we have attempted to obtain a record of the motor function with the child or infant in forced expiration and inspiration, that is, while the child was crying. To produce such a change in the rate of respiration and cardiac cycle in some of

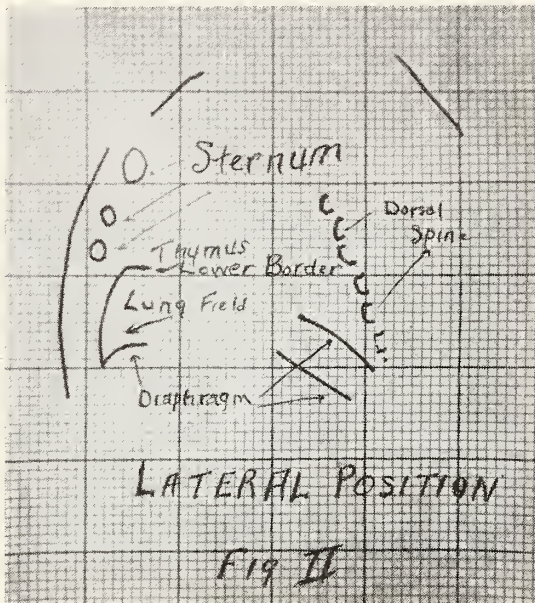


Figure 2.

Figure 2 represents an actual tracing of a film which was made with the infant's right side against the camera. It is a tracing of a lateral exposure. Note the lines which represent the diaphragm as well as the inferior outline of the thymus. Observe how these lines change their relative position in the last six outlines of Figure 4. There is some change in the relative position of the heart, mediastinum and bony landmarks. It is not as striking, however, as in the antero-posterior position.

them it was necessary to place covers on their faces to induce crying so that the desired motor functions could be recorded.

In analyzing the roll film, actual tracings were made of the outline of the interior of the thoracic cage, the mediastinum, heart shadow, diaphragm and some of the bony landmarks of each roentgenogram. Scores of tracings were made of many cases and we were greatly astonished to find that the outline of the heart, mediastinum and thoracic cage is not identical in every detail on any two of the tracings. Some approached similarity while others were greatly unlike. It is from the study of

these outlines, particularly the dissimilar ones, that we are learning the true meaning of motor function—a physiological process which we are forced to consider in our interpretations even though pathological conditions may be present.

Formerly, in the routine examination of the thymic gland roentgenologically, not enough attention was paid to this motor phenomenon. It is true, mention has been made of the heart action, respiration, etc., but it has not received the consideration it deserves.

To explain the motor phenomenon, as far as thymic shadows on a serial X-ray film are concerned, we must first consider the regional anatomy; secondly, the physiology of the cardiac cycle and respiration; third, the emotional state of the patient; and fourth, the position of the patient during the examination. The roll films which have given us the most information were made with the patients on their backs, their chins up and the X-ray tube at a distance of 36 inches from the film. The distortion at this distance was practically nil.

Anatomical Considerations: The thymus gland, as we all know, is situated beneath the upper part of the sternum, rising a little into the neck and descending to about the fourth costal cartilage, exceptionally as far as the diaphragm when greatly enlarged. It is surrounded by a fibrous capsule, thickest above where it rests upon the pericardium, and extends over the heart as two flattened lobes which are generally of unequal size. Anatomists believe that the left is usually the larger. From the

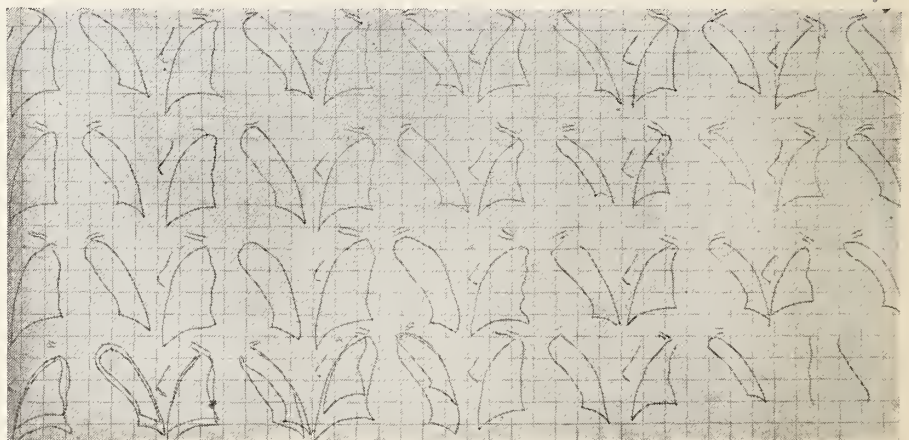


Figure 3.

Figure 3 consists of 27 skeletal tracings from one roll film of a child aged two, who in early infancy, was treated for an enlarged thymus. "Inspiratory-crow" is still present during excitement. We believe that the increased width of the supracardiac mediastinal shadow as shown on some of the films, is secondary to respiratory and circulatory changes. The irregular outline of the right border of the heart on some is due, we believe, to super-imposed shadows of the aorta, superior and inferior cave. The right scapula formed the fixed point in these comparative drawings. Note that the movement of clavicles is slight; and the change in the cardiac and mediastinal outline varies considerably from time to time.

The double tracings are presented for contrast and are selected to show the extremes in the change in heart outline with its relative effect on the thymic shadow.

X-ray literature, one would be forced to conclude that the right is normally the more prominent. This is due to the fact that on many of the films the outline of the heart or superior and inferior venae cavae have been confused with thymic enlargement. Further anatomical studies show that the thymus lies in front of and above the pericardium and against the aorta and the pulmonary arteries after they have emerged from the heart-sac. It is in contact with the large part of the arch of the aorta and is grooved on the posterior surface by the innominate vein and the superior vena cava. Laterally, it extends on each side into the interval between the pericardium and the pleura. The thymus is encased anteriorly by the sternum and the ribs which are part of the thoracic cage, moving only slightly with respiration. Hence, the lower part of the gland which is exposed bears the brunt of the so-called motor change incident to circulatory and respiratory changes.

The physiological heart mechanism in itself is not an uncomplicated one. The diastole, the systole, the gorgement at one time of the heart, the partial constriction at another time, the change in the size of the pulmonary artery, aorta, superior and inferior venae cavae all exert different pressure changes on the thymus gland. The heart mechanism is an ever-changing one. Superimposed upon this is a second motor mechanism, namely, the movement of the thoracic cage and diaphragm in respiration—a motor mechanism running at a different rate of speed than the cardiac mechanism.

Furthermore, both the cardiac and respiratory mechanism are influenced in rate

and degree by the emotional status of the patient. Is it any wonder then that scores of tracings from one patient in a serial examination have never in every detail been identical on any two tracings, but are as interesting and unlike as bridge hands? Mathematically scores of combinations are possible.

The fourth consideration, namely, position, has been mentioned previously. When the exposures were made in the antero-posterior position the chin was elevated high enough to produce a little traction on the neck to reduce the movement of the clavicles to a minimum. This position also tends to place the thymic gland as close as possible to the anterior chest wall. The films in the lateral position were made with the right side of the child against the camera.

In the past we have attempted from one or two films to pass judgment on the size of a thymus gland. In the future, serial examinations will be deemed more necessary to determine its average size. We are not attempting to decry single film examinations, but simply trying to point out the superior method of serial examination. A single film really offers much data. Many unsuspected associated pathological changes, such as atelectasis, hilus gland infiltration, fractures from birth injuries and abnormalities in cardiac outline, have been discovered by this method and the routine examination of the chest for possible hidden pathological conditions should be continued in infants and children even though thymic hypertrophy is not as common as once supposed.

Analysis of One of the Films: The film which has given us the most information in our serial study is one which was made

of a child of two years who had received, shortly after birth, a series of therapeutic X-ray treatments for a so-called enlarged thymus. The X-ray films on which the diagnosis was based showed increased width of the supra-cardiac mediastinal shadow and clinically there were symptoms, such as inspiratory stridor and cyanosis, to substantiate thymic en-

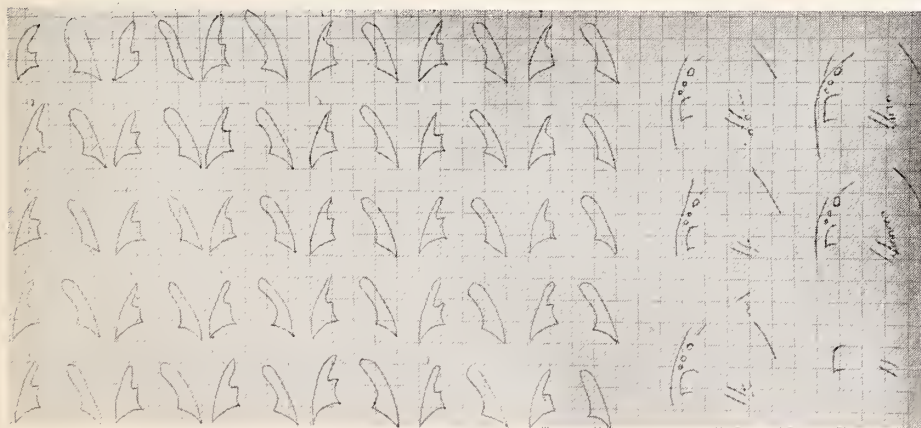
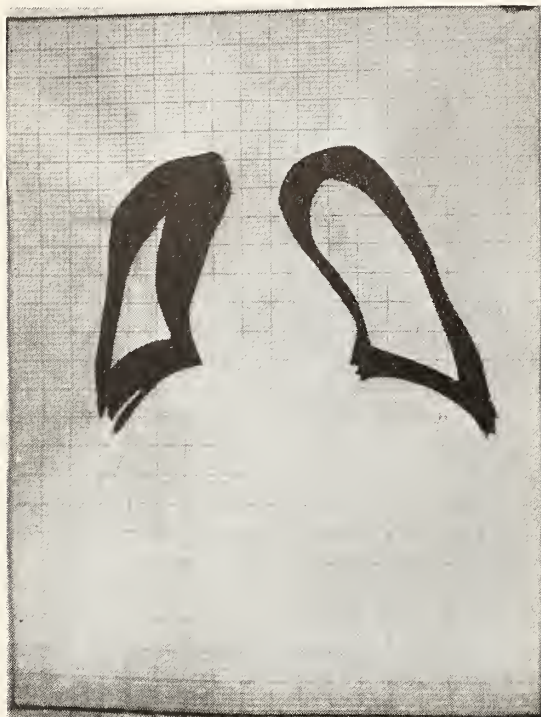


Figure 4.

Figure 4 shows a series of tracings of one case in both the lateral and antero-posterior positions. The constant deformity of the right cardiac and mediastinal outline represents, we believe, an enlarged thymic gland.

These films were made when the child was eight days old. There are no cardiac symptoms.

largement. In spite of the therapeutic X-ray treatment the inspiratory stridor persisted, but during the last few months it has lessened somewhat without any recent X-ray treatment. If we selected a single roentgenogram with the heart



Figur 5.

Silhouette 2 represents a composite tracing of about 100 X-ray films. Note the difference and degree of movement. This case presents the clinical symptoms of an enlarged thymus. It is very probable that some of the symptoms are cardiac in origin.

in diastole from the roll of films taken with the Cin-ex camera and submitted it to any competent roentgenologist, we feel certain he would diagnose an enlarged thymus and recommend that more treatment be given. Another selected roentgenogram with the heart in systole would be interpreted as positively no evidence of thymic enlargement. These same films could be presented to the unsuspecting physician—the former as indicating the size of the thymus before X-ray treatment and the latter to show how much the thymic gland decreased in size following a series of therapeutic exposures. The demonstration of any films termed before and after treatment, unless they represent identically the same phases in the cardiac and respiratory cycle, have, in the light of these new findings, absolutely no significance whatsoever, and we feel chagrined that we, too, have fallen into such pitfalls.

CONCLUSIONS

1. Serial examinations of the chest are frequently needed to establish a positive diagnosis or to rule out the presence of an enlarged thymus.
2. The enlarged thymus is not as frequent as was once supposed.
3. Some of the respiratory symptoms which have been accepted as indicating thymic enlargement may probably be cardiac in origin.

EVERYBODY GETS SICK ONCE A YEAR, ON AVERAGE

On an average, each person in the country has at least one disabling illness every year, the Committee on the Cost of Medical Care has reported after a survey of various sickness reports compiled by the United States Public Health Service and other organizations.

Men have a disabling sickness about once a year, women about twice and children over twice during the school year. Colds, bronchitis, grippe, influenza and pneumonia are oftenest the cause of these disabling illnesses and cause the longest disability. On the same basis of the number of cases and total time lost digestive disorders and diseases also take a high place.

About 130,000,000 cases of disabling illnesses occur in the United States each year. Adding non-disabling illnesses more than doubles the figure, the committee reported. The 36,000,000 wage earners in the country lose at least 250,000,000 work days per year, and the 24,000,000 school children lose 170,000,000 school days per year. These figures account for only one-half of the total population.

"Authorities have stated that there are at all times approximately 700,000 persons with tuberculosis, 10,000 with pernicious anemia and 110,000 addicted to narcotic drugs," the report said.

"In any one year there are in the United States over one million cases of malaria. Syphilis and gonorrhea at any one time appear to be causing nearly one person per 100 to place himself under the care of a physician. Over 36,000 cases of smallpox were reported in a recent year. While childbearing is not a disease, it does cause a large amount of disability. In 1928 there were nearly 2,000,000 births in the registration area, many of them followed by complications and a considerable number (a larger proportion than in most civilized countries) by death.

"Hospitals for mental and nervous diseases contain over 350,000 patients, and this figure is far below what the total would be if those not hospitalized were included. Of the children now attending school and college, 'over 960,000 will enter a hospital for mental disease at some period in their lives if present rates for first admissions continue.' These figures include only the more serious mental diseases and take no account of the large numbers with lesser mental disturbances.

"Hospitals other than those for nervous and mental diseases contain, on the average, over 350,000 patients at all times. The total in all hospitals on a single day is about 700,000."—Science Service.

THE USE OF X-RAY IN THE TREATMENT AND DIAGNOSIS OF ENLARGED THYMUS

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The anatomical variation in size and shape of the thymus gland was recognized as early as the seventeenth century. The possibility of a thymic death was brought out by Morgagni two hundred and fifty years ago, and clinical signs and symptoms have been noted by clinicians for as long a period. With the advent of satisfactory X-ray examination of the chest it became possible to demonstrate the shadow of the thymus gland, particularly when enlarged. Prior to the introduction of X-ray treatment for enlarged thymus by Lange in 1911, thymectomy or sternal decompression were the only known means of relief. Since then radiation treatment has become the method of choice in handling all cases of hyperplasia of the thymus.

The thymus is a bilobed structure of lymphatic tissue, characterized by the presence of Hassell's corpuscles. It is situated in the upper anterior mediastinum and moulds into its existing shape during the establishment of respiration. In the presence of disproportion between the size of the moulded organ and the cervico-thoracic space pressure may be exerted on the adjacent organs. This is purely mechanical and the result of overcrowding. Variations in size of the thymus occur with age, state of nutrition and in infectious processes. The gland reaches its maximum weight at puberty, but in ratio to body size is largest at birth. Transitory fluctuations in size from circulatory changes may occur during exertion such as crying or struggling.

Certain constitutional types are apparently predisposed to thymic enlargement. Infants of the thymicolymphatic type reveal thymic hyperplasia which may or may not be productive of symptoms. A persistent thymus frequently exists in conjunction with thyroid disturbances, especially in the Basodowian constitution.

Patients with enlarged thymi may be classed in three groups according to the age at which the thymic enlargement becomes clinically important. These are: Early infancy, during the tonsil and adenoid age, and in the third decade accompanying thyroid disturbance. The clinical signs and symptoms indicative of enlargement during early infancy are as follows:

1. Transitory cyanosis often with unconsciousness.
2. Respiratory difficulty.
3. Asthenia.
4. Snuffles.
5. The so-called thymic stridor.
6. Regurgitation.
7. Abnormal sounds during crying and feeding.

The older children of the second group often exhibit one or more of the following indications of the existing conditions:

1. Undernourishment and pallor.
2. Early hypertrophy of the tonsils and adenoids.
3. Any of the symptoms characterizing the condition in infancy.

In the third age group, few if any clinical manifestations of thymic enlargement are present. Symptoms of hyperthyroidism dominate the clinical picture in this group.

The differential diagnosis of an enlarged thymus during the first and second age periods must take into consideration the following conditions: Spasmophilia, congenital heart lesion, atelectasis or early pneumonia, or foreign body in the bronchus. The most exact method of differentiating these conditions is by X-ray examination.

The incidence of thymic enlargement as reported by numerous writers varies widely. Some observers have reported their findings in only the newborn, others have collected cases from infancy to twelve years of age. Some have reported a series of selected cases, such as those showing symptoms. None of these can be compared with the percentages shown in routine examinations. As high as 50 per cent of newborn have been reported as showing an enlarged thymus. The general average, however, is about 15-18 per cent in the newborn and 7 per cent in children from six to ten years.

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Another reason for the discrepancy in statistics relative to enlarged thymus is that no standard has yet been established as to the exact limits of normal for a shadow in the upper mediastinum. As pointed out under anatomical considerations it should be emphasized that the proportion between thymic size and available space in the upper mediastinum is of more importance than the actual volume of the gland.

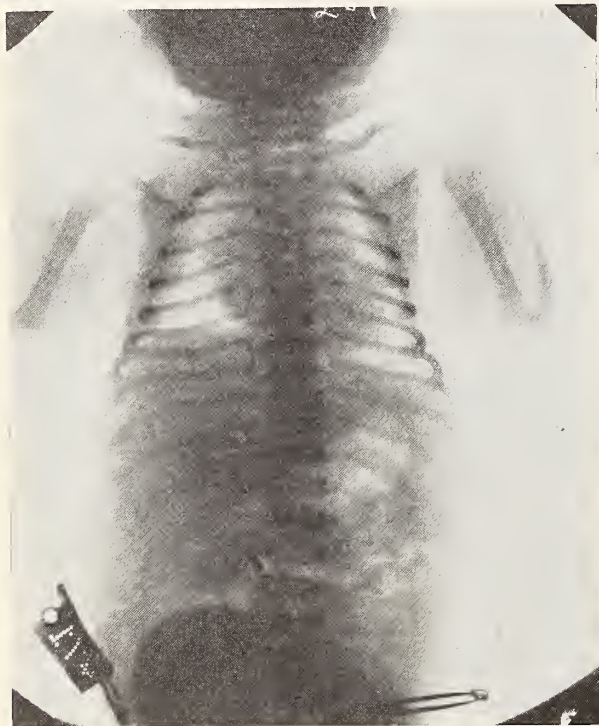


Figure 1 (a)

Antero-posterior view showing a broad dense upper mediastinal shadow. The lower borders of both lobes of this thymus are distinct.

In this connection it is well to note that various authors are not in perfect agreement as to which of the various factors—mechanical pressure, edema of the mucosa, or nerve influence accompanying tracheo-bronchial node enlargement—play the most important part in the production of thymic symptoms. It is probable that the relative importance of these three factors varies in different cases.

The presence of an enlarged thymus may be suspected on the basis of several associated findings. Geographical location is a factor to be considered. In so-called goitrous sections of the country enlarged thymus appears to be more prevalent; however, a large series of cases demonstrates that mothers with enlarged thyroid do not necessarily have babies with thymic enlargement. Sex, obesity in the parents, and age of the mother apparently play no

part. The heavier babies seem to show a slightly larger percentage of enlarged thymi as demonstrated both by clinical and radiographic examinations. The presence of thymic enlargement or history of a thymus in any of the children of a family increases the likelihood of other children in that same family showing a similar condition.

Confirmation of a suspicion aroused by any of the above named findings is furnished by X-ray examinations of the chest. The films must be of good quality and a most accurate interpretation can be made when films are taken in the antero-posterior and lateral projections. There are different technics advocated throughout the country, all serving the purpose of the individual using them. The principal consideration in this connection is the establishment and use of a technic in which the normal is known.

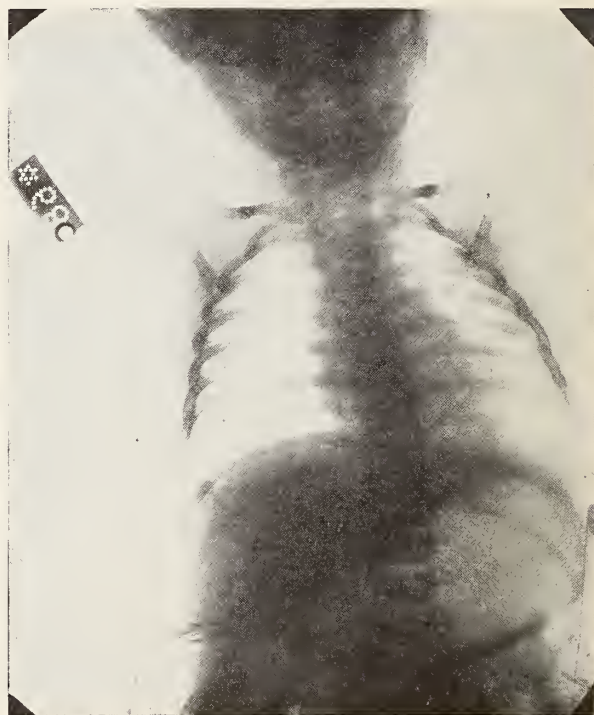


Figure 1 (b)

Anterior-posterior view of same patient after radiation therapy. Note decrease in size of shadow of the thymus.

A widened upper mediastinal shadow, distinct from the great vessels and resting over the base of the heart is strongly suggestive of an enlarged thymus. This shadow may be unilateral or bilateral. Tracheal compression in either projection is definite evidence of mechanical pressure. It is only in the most marked cases that the latter finding of tracheal distortion is present. A shadow more than 60 per cent of the diameter of the chest at the level

of the second rib should be regarded as above the normal size limit.

In this connection it must be emphasized that thymic paroxysms may occur in patients where X-ray evidence is slight. There does not seem to be any constant relationship between the size and shape of the shadow and the severity of the symptoms. Therefore, while films are important in demonstrating the presence or absence of thymic shadow, the clinical symptoms, as previously noted, are necessary in evaluating the urgency of the condition. Neither examination, clinical nor roentgenological, is complete without the other.

Having established the presence of thymic enlargement, the necessity of treatment must be considered. We have two methods of treatment at our disposal; namely, X-ray and radium. Either will produce satisfactory decrease in the size of the gland, but from the standpoint of

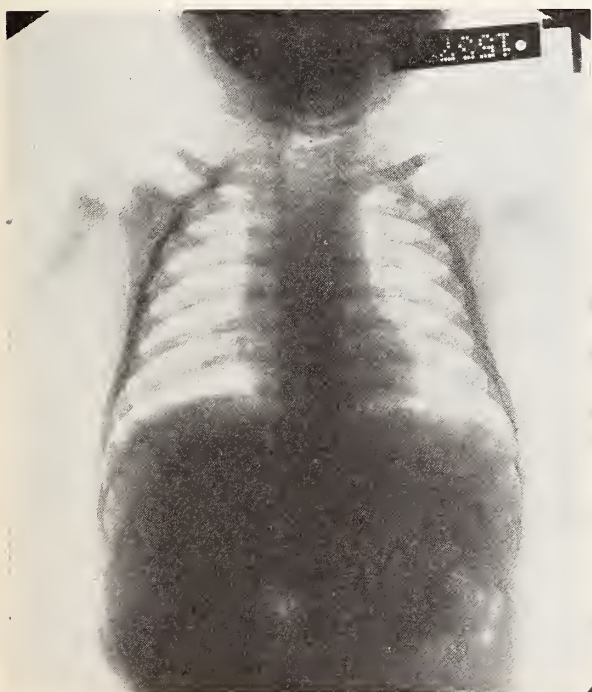


Figure 2

Anterior posterior view showing slight increase in mediastinal shadows—practically normal.

availability, economy and comfort to the patient, X-ray is the method of choice. The patients requiring treatment may be divided into two groups; those having thymic attacks, and those with an enlarged thymus, but without clinical symptoms. From a therapeutic standpoint these groups must be considered separately. In the first group we feel that it is best to administer small doses at from 24-72 hour intervals. The amount of radiation administered at each treatment is about 30r

(air value), or about 10 per cent of a mild erythema dose. Filtered radiation is used in all cases. The administration of treatment by interrupted doses is important because of post-radiation swelling, which might be responsible for an alarming exacerbation of symptoms. Even with the small doses used, careful observations made during the 12-24 hour period following radiation will occasionally show a transitory increase in the symptoms. This is



Figure 3 (a)

Lateral view of patient Figure 2, showing posterior enlargement of thymus with deformity and compression of the trachea.

followed by a rapid amelioration of the cyanosis, dyspnea and stridor. In patients showing extreme symptoms it is well to hospitalize the individual in order that emergency measures such as the administration of oxygen or epinephrin may be carried out. We must remember that in many of these cases we are dealing not only with an enlarged thymus, but with a thymico-lymphatic constitution characterized by hypoplastic suprarenals and an unstable blood vascular system. We cannot expect to alter the constitution, but hope to carry the individual through a critical period in order that he may later adjust himself to this constitution.

The number of X-ray treatments required in this group varies with the individual. In most cases three or four treatments suffice. These patients should be followed clinically for at least a year, as in a small percentage there is a regeneration of the gland, and in a still smaller

number, a return of the symptoms. Any future operative procedure in an individual of this type should be preceded by prophylactic radiation of the upper mediastinum.

The second group, those patients with an upper mediastinal shadow, but without symptoms, require a somewhat different type of treatment, depending on the age group into which they fall. If these patients are infants they are considered as



Figure 3 (b)

Lateral view of patient (a) after therapy. Note decrease in size of shadow of the thymus and normal appearance of the trachea.

potential subjects for thymic attacks and are treated in a manner similar to group I. If the patient has reached the tonsil and adenoid age the treatment is not extended over as long a period. Therapy in this latter group of patients is administered as a prophylactic measure and may be classed under preventive medicine. In this connection it would seem that a large number of operations can be postponed with safety until after prophylactic treatment has been administered. This delay is justified by reason of the fact that the individual requiring early tonsillectomy is a poor operative risk from a thymic standpoint. As previously mentioned, thymus enlargement is particularly apt to

be associated with the presence of early lymphoid hyperplasia. In this type of individual the margin of surgical safety increases with age. If operation is imperative during early years, pre-operative prophylactic radiation may prevent the occurrence of a thymic tragedy. We feel that surgical procedures may be safely undertaken within 36-48 hours following the completion of treatment.

The initial treatment given to individuals showing no clinical evidence of thymic enlargement is usually somewhat larger than that administered to the patients showing symptoms. Approximately 60r is given at weekly intervals and check-up films are made to determine whether or not there has been any change in the size of the shadow.

A decrease in size of the thymic shadow or diminution in the symptoms following treatment confirms the diagnosis. An un-

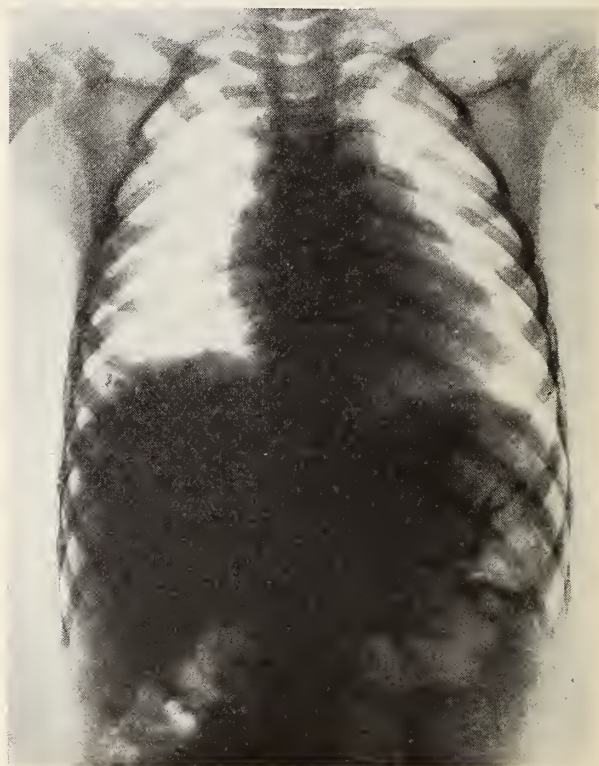


Figure IV (a)

Normal anterior posterior view of the chest of an infant.

diminished shadow persisting after proper treatment indicates that we are not dealing with parenchymal hyperplasia, but with thymic fibrosis or visualized mediastinal vessels. The futility of continued radiation in the latter group is evident.

The most marked decrease in size becomes evident within a week or ten days following one or two treatments. We find that the response of enlarged thymi to

treatment is elicited with smaller doses in infants than in children. This may be explained by the greater maturity of the cell structures in the older group. On the other hand, regeneration of the gland is more apt to occur in infants.

In the third age group in which thymic enlargement is co-incident with thyroid disease, we feel that treatment is indicated whether the thyroid is being treated surgically, medically, or by radiation. The dosage in this last group is somewhat larger than is required in children, for here we are dealing not only with a more mature structure, but with a thicker chest wall.

The treatment of thymus enlargement by radiation is a decidedly satisfactory procedure. True enlargement, with or without symptoms, responds to relatively small doses. We have never found it necessary to use other than a single anterior

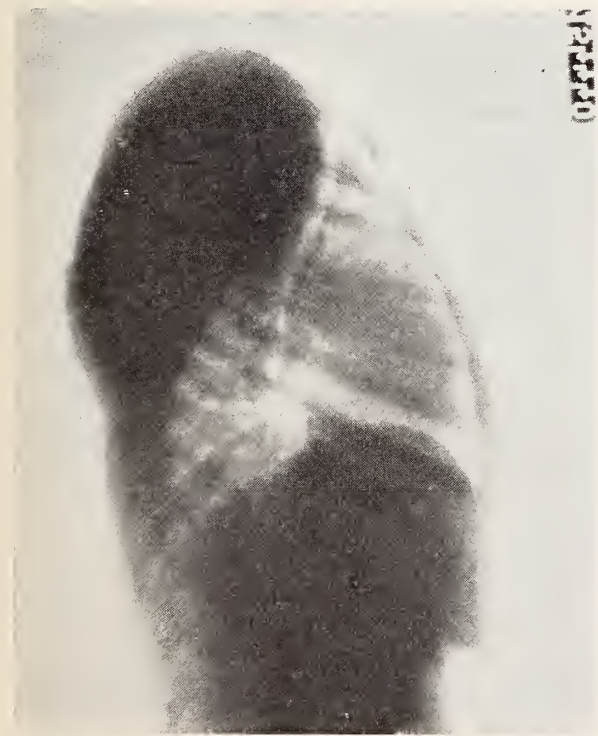


Figure 4 (b)

Normal lateral view of the chest of patient shown in Figure 4 (a).

field of application, and with the methods used we have not noted any immediate ill effects other than those due to post-radiation swelling.

A careful follow-up of over one hundred post-radiation thymic patients treated from five to eight years ago, reveals the fact that while these patients received larger doses than we are administering at present, no ill effects were noted, in either the mental or physical spheres.

DISCUSSION

Dr. D. J. Levy (Detroit): It is interesting and somewhat dismaying to note the complete lack of criteria that we have in estimating the role of the thymus in pediatrics. We lack criteria as to the anatomical norm and as to the X-ray norm of the thymus, although I am sure that Dr. Hasley made a most important contribution here. We don't know the function of the thymus. We are completely out of accord as to the clinical picture produced by thymus pathology, if any, and divergent as to indications for and methods of treatment in these states.

When one considers the almost complete lack of definite information that we have in regard to this organ, one can readily understand why these opposing views are taken in regard to it. As a consequence, one must assume that an honest opinion, based upon thorough clinical study, is entitled to every consideration, no matter which side of the question an individual is inclined to take.

I like the attitude of nihilism that has grown up in regard to the thymus because it has counteracted very materially the opposite tendency which has existed so largely in pediatric thought in recent years. I think we all agree that there has been a tremendous over-emphasis on the role of this gland, an attitude that has been carried almost to a preposterous extreme. Still, one must remember that there is no tissue of the body that is not prone to pathology. There is no tissue of the body that cannot assume abnormal states, and most assuredly we know that a glandular tissue or a lymphoid tissue is one that is prone to hyperplasia and to hypertrophy, and hyperplastic and hypertrophic tissues are prone to dysfunction.

Inasmuch as that is the case, and inasmuch as we don't know the role of this gland whatsoever, it is only safe to assume that in some instances, certainly relatively rare, the gland can assume pathological significance. It is important to know, however, that only a very small percentage of the conditions, which we have attributed to this gland are necessarily due to it, that a wide variety of other conditions which we have been inclined to overlook, can produce a picture which we have interpreted otherwise. There is, unfortunately, a tremendous over-emphasis on this gland existing in less specialized circles than our own.

Just this week I saw two instances which illustrate that fact, one a new-born baby with clonic convulsions, with recurring attacks of cyanosis, in which the diagnosis was made of thymic pathology, where on examination the cardiac basis was immediately demonstrable. In a somewhat older child, three years old, with convulsions, a diagnosis was again made of thymic pathology. The child had a condition easily recognized clinically as heart-block.

I am very sure that the majority of our cases of so-called thymic disease are of cardiac, vascular, cerebral, pulmonary, or rather, atelectatic origin, or, maybe as frequently as any, where a condition of stridor is involved, that of pathology of the laryngeal structure, particularly in regard to the adequacy of the laryngeal musculature. Although that is the case, and 98 per cent of our cases presenting these symptoms are of other origin, it does not justify us in disregarding the possibility of the thymus being responsible for rare cases that we encounter.

I personally give my patients the best study that I can, and I am sure that I have encountered instances in which I could not exclude the thymus

as having been the factor. But I am very sure that there have been other cases in which that element has been construed as predominating, in which the facts did not warrant the assumption.

I believe that the only thing we can do today is to assume that the thymus is something of which we know very little, that, as a tissue in the human body, it is susceptible to pathology. Being susceptible to pathological states, it can, under circumstances, produce disease conditions, and as such we must keep aware of that possibility. Inasmuch as that is the case, we must recognize these states when they occur.

If we are going to use the thymus gland, as has been the case in the past, as an escape, as a means of hiding our ignorance, a diagnosis to get behind because we don't know what is wrong with the child, we are going to cause disaster and bring the whole profession into disrepute.

Those of us who have been in medicine for a long period of time have seen these recurring cycles and waves of belief in regard to this, that and the other phase of medicine. We have seen the thymus credited with a great deal for which it should not have been credited. We are experiencing today a situation in which it is not considered fashionable to believe that the thymus can be responsible for anything. I don't want to say that there is a middle ground. The thymus probably isn't quite that potent, but somewhere between the two extremes we are going to find that the thymus gland plays a role. The man who says that it is responsible for as much as we were inclined a few years ago to believe, certainly hasn't a foot to stand on. The man who claims that the thymus gland cannot be responsible for any symptomatology whatsoever is likewise without proof of his position. He may be right, but in the light of our present day knowledge and in the light of the lack of criteria that we have as to the thymus gland, he can't prove that he is right. Until the time occurs that we can get absolute knowledge one way or the other in these cases, after adequate study and elimination of all other factors, they deserve the benefit of such doubt as there may be.

Dr. R. M. Kempton (Saginaw): It seems to me that this has been one of the most worth-while discussions that we have been privileged to listen to in the state society for some time. It certainly has been well worth the long drive here.

When one visits the clinics about the country, one is struck by the varying approaches and opinions held on this subject by men of equally good standing. After the discussions such as we have heard this morning, in which various opinions have been given by our own men, to some degree, we can easily understand why that is true. I think it would be idle for me to attempt to review this splendid work that has been given this morning and also the splendid discussion given by Dr. Levy, but there are one or two clinical applications, it seems to me, that we might speculate upon.

For example, when we understand that such a large percentage of children will be given a diagnosis of large thymus by our roentgenologist, how careful we should be in throwing bombshells into the household with regard to the child's diagnosis. We have all seen nervous mothers almost go without sleep. They wake up during the night to see if the baby is still alive, because somebody has told them that the child had a large thymus. If it is true that a large series of cases of newborns have shown that 40 to 50 per cent of the

children do show shadows, then that should be of some reassurance.

On the other hand, we do not know that a certain number of those cases are going to get into trouble, a small percentage of them. Would this be a good way to leave the matter? That we divide these cases into those that show symptoms and those that do not; those cases showing symptoms we will treat carefully; the group which do not show symptoms, which have a negative hereditary history, we will watch, expecting, of course, that a very small per cent will have an occasional accident.

In a recent discussion with Dr. Marriott, that is the attitude which he assumed. He treats the cases showing symptoms. The internists and surgeons have gone through much the same phase with the thymus gland in adults, varying methods of handling conditions. They are gradually settling down, I believe, to a rational basis. This thing, of course, is going to settle down gradually.

In the use of the X-ray we do have a potent method of bringing about certain results in the reduction of the size of the gland and no doubt in the function of the gland. With regard to the thyroid, the effect of the X-ray on the basal metabolism has been shown very clearly, in preoperative and postoperative cases. We know that we can reduce the function of the thyroid gland temporarily. In the X-ray we have a remedy which will cut both ways. It will cut down the size, reduce the size of the gland, and it will have some effect in reducing the activity.

Dr. E. W. May (Detroit): We have to take everything into consideration when we make a diagnosis of enlarged thymus, as to whether it is pathological or not. I want to point out several main things about this condition. First, the statements that we have had from men of different parts of this country and from Germany are from districts that are not in the goiter belt, or they do not have anything to do with goiter districts. I don't believe that those men see a great many cases of enlarged thymus. I believe that we will eventually find that the thymus gland is in close relationship to the thyroid, that it has a definite function in calcium metabolism. We find it in about 90 per cent of the young children having infantile eczema.

As far as the work of Dr. Hasley is concerned, I think that is an excellent piece of work, but I want to point out that he showed the case of an eighteen months old baby and in comparison with that he showed an eight days old baby. The eighteen months old youngster apparently had what we call thymic symptoms. I don't consider those enlargements any more, after seeing a great many autopsies on newborn infants and seeing that the type of thymus in those youngsters, in the main, has been what we call the cupping type, hugging down over the heart, with the large lobe on the right side.

There is another type that I term the keystone type that involves the upper part of the mediastinum more than over the heart. Then there is another type of the flat, pancake variety that involves the middle of the mediastinum. That bulges out considerably.

We ran a series of cases from Kiefer Hospital. We took all the youngsters that we considered were of that type, that is children weighing eight pounds or over, those that were twins and premature babies, those that had deformities, cleft palate. We rayed all of these youngsters, and everyone that showed a mediastinal shadow,

that I considered was a third degree, that was at least one to two finger breadths outside of the transverse processes on each side of the spine, were referred to Grace Hospital to see whether they developed the symptoms that we saw in youngsters after the first month. Dr. Wishropp followed those cases through, and I think he can tell us some of the results. I haven't had any conference, except this morning, with Dr. Wishropp about those cases.

I believe that in the past we have laid too much stress on the very small enlargements. Unless the babies at Kiefer Hospital showed definite cyanosis, there was no treatment given, whereas two years ago we treated every case that had a definite enlargement. I feel that I want to become more conservative about it. But still we must depend, too, upon the lateral views. In the past year I found one case that had a definite bark-like cry, just like a small pup dog barking, and another case where the baby was unable to cry out loud. We made lateral places on those cases and found a definite stricture of the trachea.

We gave those babies three treatments, and in both cases the cry became normal. I believe that it is going to take years before we will know definitely what to do in regard to the thymus.

Dr. E. Wishropp (Detroit): On the cases X-rayed at Grace Clinic, which were sent over from Herman Kiefer Hospital, we had a report of very positive finding. I was rather reticent to treat them on the first return to the clinic, unless I was very sure or actually heard a definite crowing and observed some cyanosis. I think that out of the fifty-seven cases, I sent fifteen down for treatment. Those fifteen cases were treated at intervals of one week, from one to three times, with the usual X-ray dose. All of those cases, excepting four, followed out the instructions very well and improved. They showed definite improvement in the symptoms for which they had been sent down. Two of the four that I mentioned did not improve, and two of them I lost. I haven't any report on them. We divided the symptoms. Besides the crowing, there were other symptoms, so-called irritability symptoms which I associated with lack of calcium assimilation or something of that sort, such as eczema, a definite vomiting which was recurrent and persistent, considerable amount of gas, so-called colic. They were not treated by an attempt at feeding. I sent down one or two of those cases but for only one treatment. They seemed to improve, but I felt that was probably because of better management on the part of the mother.

It seems rather conclusive that the X-ray was beneficial in a considerable number of the cases that showed the crowing and cyanosis. One case improved without any treatment at all, and it seemed to me that that had most marked cyanosis and crowing. I could find nothing in the heart or any other evidence that we considered the laryngeal stridor. That case did not improve under any consideration. The child crows now just as badly as it ever did. It is about eleven months old.

Dr. Donald J. Barnes (Detroit): I don't know whether it is of any importance, Mr. Chairman, but regarding the incidence of thymus disease or thymic hyperplasia in the goiter region, I noted a small group of cases who were given (that is the mothers) both calcium and iodids during their prenatal period. One of the children had what we considered some symptoms due to

enlargement of the thymus. But it was just a small group, and apparently the administration of calcium and iodide had no effect.

Dr. D. M. Cowie, Ann Arbor: I am very much interested in this symposium, and particularly in the beautiful serial slides Dr. Hasley has shown. There is a definite symptomatology with which you are all familiar that we have attributed to the thymus. There is no question but that we are now able to tell by various means whether the thymus is enlarged or not.

For quite a number of years at the University Hospital Clinic we have taken into consideration the importance of the excursion of the diaphragm in its bringing about changes in the X-ray picture. We have also felt that it is important to take a lateral picture of the chest to prove whether the thymus is enlarged or not. We have had one experience where we were sure the patient had thymic symptoms, and the X-ray department was sure there was no enlarged thymus. This case came to autopsy. We found a very much enlarged thymus of a very unusual type. There was an increase in the antero-posterior diameter of the thymus. It laid directly back of the sternum and showed no lateral shadow whatsoever. I think there is no question that this symptom group is very often made better by exposure to the X-ray whether we find an enlarged thymus or not.

We have had some experience with hare lip cases at the University Hospital. In the old hospital where our facilities were not as good as they are at the present time, our death rate in the hare lip group was far too great at one time. We did not know just how to overcome it. Finally, our knowledge advanced far enough to make us feel that it would be a wise thing to make X-ray pictures of all these cases before they were sent to the operating room. Some of these would show thymic enlargement. We adopted the plan for a time that whether we found an enlarged thymus or not we would give them an X-ray treatment about twenty-four hours before the operation was performed. Our death rate was lower after this.

Of course, we must also remember that we were making a great effort to prevent anything happening to these infants, and maybe that increased effort was a great factor in lessening the death rate of the harelip group as was our effort to have an X-ray exposure made. At the present time quite a number of the harelip cases are receiving X-ray treatments prior to operation, but not all.

Dr. Harold H. Roehm (Birmingham): In regard to the geographical distribution of the thymus, particularly in the so-called goiterous areas, I had the pleasure of a short conversation with Dr. Fehr a while ago; my leading question was this: "In this goiterous region where you have a great deal of thyroid enlargement, how often do you see an enlarged thymus?" His answer was, about one in one thousand.

The other thing I should like to say is this, in hearty subscription to Dr. Cowie's statement: There is a symptom syndrome which you are going to see and which I think perhaps I see in about one in sixty infants. That is relieved by a moderate amount of X-ray treatment. It may or may not be X-ray evidence of the enlarged thymus. Your patient, the mother, and yourself are seeking relief of this symptom. In the very small doses of X-ray given by someone who is competent to do it, and with proper protection of the organs, there is no danger. We know that

we do get relief from these syndromes. Therefore, I would beg that cautious X-ray treatment of a patient with this symptom syndrome be not thrown into the discard. I think it is still valuable.

Dr. F. Miner (Flint): This discussion is most interesting. Dr. Hasley's contribution is going to give us new studies, I think, in thoracic cases. I should like to ask Dr. Smith one question. Did you give us to understand that the overfeeding of vitamins will increase the size of the thymus?

Dr. Clement Smith (Ann Arbor): I had the report of one case.

Dr. F. Miner (Flint): What vitamin?

Dr. Clement Smith (Ann Arbor): I believe there were all three, A, B and C, of the original vitamins.

Dr. F. Miner (Flint): Then, aren't we in face of a new danger? The pharmaceutical houses have found a new process or way of selling their cod liver oil at an increased price. Our wastebaskets are already beginning to groan from the amount of literature that is coming through the mails on the vitamin proposition.

The tendency of the profession, as Dr. Levy summed it up, is all too true. How eagerly we grasp at new things and use them all too indiscriminately. I wish the general practitioners could have heard this symposium this morning. They need it. They are the men who are going to use the new form of cod liver oil in as big doses as the ordinary cod liver oil. It will be interesting for you investigators in the next few years to observe whether the thymus is going to increase or not since this boosted strength of the vitamin in cod liver oil is going to come into use.

Dr. Thomas Gordon (Grand Rapids): I just want to say this one thing, it is beginning to be apparent that our old idea that mechanical pressure on the trachea was the cause of symptoms and of thymic death, is not the only factor. There must be other things in the way of internal secretory connections with other glands, nervous things in connection with this vagotonia, possible heart lesions, causing these deaths, and many other things that must be taken into consideration in interpreting the deaths from status thymicolymphaticus. Our nose and throat men are going to give up the easy explanation of the sudden deaths after operation, as they explain them all by thymic death.

Chairman O'Donnell: Dr. Parsons and I placed this subject on the program for one reason, to bring out discussion. We know that the last word had not been said on the subject. I think the end has been well met in that everybody has taken an

interest in the subject. I think we have a great right in pediatrics to discuss it pro and con.

As Dr. Kempton mentioned, the subject of thyroid is in about the same state. Great research has been done on it. Despite that fact, they are still in the air as to whether to use X-ray or radium or iodine. The same thing can be said, for instance, of gastric surgery, the treatment of ulcers. They go back and forth, and out of that great maze of discussion, they gradually arrive at certain definite conclusions.

It is quite interesting to watch the trend of this condition. For instance, Dr. Abt of Chicago, a man of great experience, who has had a wonderful experience both in the hospital and private practice, in his book, "The Year Book of Medicine," uses two lines in the editorial practically saying that thymus is the bunk. Dr. Morse, a man of long experience in Boston, passes off the same thing.

The younger generation, that is going by years of experience, for instance a great many of Abt's men, put on a big symposium in the Chicago Pediatric Society about eight weeks ago. The whole evening was taken up by a discussion on thymus. Many of the things brought out today in this symposium were brought out by these younger men.

My idea was to bring this up, with the idea that maybe three or five years from now we will bring it up again in this section to see if we can gradually clear the light as to what it is all about. I started out in sort of the birth of the thymus in Ann Arbor. We did a great deal of work on it there, and I really feel that I know something about it. Today I have a few ideas on it, but I do not care to express them. They have been well expressed by other people. I think the best thing that can be said is that we should all keep an open mind.

A great many of the discussions today dealt with various types of cases, some with hospital clinic cases. I think the harelip group at Ann Arbor is a definitely inferior group of individuals. I worked there for five years and had a chance to observe it. Probably that whole group is a constitutional group. Along that line, out of the maze of goiter work by Dr. Ward, who is a great observer, he has written a very interesting article on the thyroid constitution, practically showing from his observation that thyroid toxicosis or abnormal thyroid, anything that is toxic in the thyroid is the fundamental basic factor that the patient shows a certain definite constitution. That has also been brought out by Sanders in New York.

I hate to see anybody take a closed attitude on the subject. I feel that everybody has a right to his own opinion. If we do that and close it out in one way or another, it will do away with this very nice discussion which we have had today.

TEETH TROUBLES HEAD LIST OF OFFICE WORKERS' AILMENTS

Only 6 out of 1,000 male office workers were found free of physical defects in a study reported to the American Public Health Association by Drs. William Muhlberg, Corey P. McCord and Floyd P. Allen of Cincinnati. Among the other 9,994 men, defects of teeth, weight, heart and blood vessels, vision, and hearing were most frequent in the order named. The men examined were all ages from under 35 to over 65 but three-fourths of them were between 30 and 55 years. Significant physical defects were found in 781 of the group, only minor defects in 213.

Overweight was found to be a bad condition occurring along with defects of heart and blood vessels, especially in men over 45 years. The examination records showed that over three-fourths of the men would benefit by early medical care. In many instances defects were discovered which would eventually lead to serious physical handicaps, but which were unknown or uncomplained of by three-fourths of the entire group. The study was sponsored by the Heart Council of Greater Cincinnati.—Science Service.

"THE DOCTOR'S LOG"

WILLIAM J. STAPLETON, Jr., M. D.*

DETROIT, MICHIGAN

Lord Bacon tells us: "Travaile in the younger sort is a part of education; in the elder, a part of experience. That young men travel under tutor or grave servant I allow well; so that he be such a one that hath the language, and hath been in the country before, whereby he may be able to tell them what things are worthy to be seen in the country where they goe. Let him carry with him also some card or booke describing the country where he travelleth, which shall be a good key to his enquiry. Let him keepe also a diary. Let him not stay long in one city or town; more or lesse as the place deserveth, but not long. When a traveller returneth home, let him not leave the countries where he hath travelled altogether behinde him. And let his travaile appear rather in his discourse than in his apparrell, or gesture. An in his discourse, let him be rather advised in his answer, than forward to tell stories."

As a sub-title we might use "Five Thousand Miles in Europe Without a Puncture," for that is the record of our sturdy Cadillac this past summer. We drove from Detroit to Montreal, stopping at Toronto, which has much of medical interest. Montreal with its memories of Osler and McGill, has an absorbing tale for the physician. There the car was put aboard the Duchess of Bedford. Taking one's car to Europe requires certain formalities, most of which are taken care of by the steam-ship company. After filling out a full description of the car, declaring extra tires, tubes, horns, and tools for customs; obtaining permits for landing and space on the boat, we joined the Royal Automobile Association of England. Italy is the only country in Europe that recognizes an American license. When we landed a representative of the Royal Automobile Association of England met us with all the necessary papers, French license plates, a good supply of oil and gas, and in an hour's time we were off. American citizens, members of the English Automobile Club, traveling with French license plates, some combination.

Early Sunday morning we landed at Cherbourg. Our car was swung off on a tender; we went through customs and were on our way within an hour. The Michelin Tire Company of France publishes road maps and guides at a most reasonable price. The roads of France are all well marked and with a little practice one soon learns to know where to look for the markers. We lunched on luscious strawberries with clotted cream, omelet and fresh lobster salad at St. Patrick's restaurant in the old town of Bayeaux, where we

saw the famous tapestry made by the Good Queen Matilda and her maids. This so-called tapestry is about seventy-five feet long, showing in a curious and delightful way the story of William the Conqueror and the Norman Conquest.

From Bayeaux to Caen, the old stronghold of William and Matilda, we found a fine old cathedral and a town teeming with historical interest. The Chandivert, one of the best restaurants in France is here close by the church of St. Pierre. Thence on our way over the good Norman roads to one of the wonders of France—Mont Saint Michel.

MONT SAINT MICHEL

Originally Druids held their mystic worship in the great Abbey Church on the Norman Coast, and the Romans had their temple to Jupiter. In the eighth century at the command of St. Michel, a good bishop built the first Christian shrine here. Later a great earthquake caused a tidal wave to sweep over the surrounding forest, isolating the Mont from the mainland. It remains today the most picturesque and unique spot in the world. It's a mass of huge granite rock rising out of the sea, a fortress with a village of walls and steep winding stairways on the summit of which stands the great abbey church with the armour clad figure of St. Michel, conqueror of Satan and patron Saint of France. It was in 1066 William of Normandy conquered England—the Norman Conquest. England remained united with Normandy for one hundred and fifty years. After centuries of vandalism, Mont Saint Michel remains a marvelous piece of construction, a religious art treasure dear to architects. Here we stopped at the famous Hotel Poulards where for dinner we had omelet a la Mere Poulard and roast chickens, revolving on a spit before a great log fire in the ancient kitchen. (Mere Poulard's son

* Dr. Stapleton is well known to the medical profession of Michigan and particularly well known to the Wayne County Medical Society where he was President in 1924-25. The Journal has had the opportunity of publishing a number of "Doctor's Logs" in the past. The comment has been so favorable that we take pleasure in presenting herewith Dr. Stapleton's traveling experiences of the past summer.

is a famous Parisian oculist). Henry Adams has written a fascinating book, "Mont Saint Michel and Chartres", which makes the meaning of Medieval architecture a living thing.

West of Mont Saint Michel in Brittany is the town of Quimper with its monument to that great master of Internal Medicine, Rene Theophile Hyacinthe Laennec. Franklin Brucker, the young Detroit artist has pictured nine great medical men in his cover for the Bulletin of the Wayne County Medical Society. Three of these are French, Pare, Pasteur and Laennec—



TH. LAENNEC,
1781-1826

the French honor their doctors. In Paris many of the hospitals are named after French physicians—Hospital Laennec, Jarnier, Claude Bernard, and Pare. There is the Rue Medicine, the Musee Duptyren and many others, also the hospital wards are named after the men who labored there. In the courts of the schools of medicine are busts of the foremost professors. War has its monuments to generals who led men to death, why not a memorial to the heroes who help men to live?

LAENNEC

Laennec, the inventor of the stethoscope and author of that Classic "De L'Auscultation Mediate" was born in Quimper. He was the man who did the most for the consumptive, accidentally inoculating his own

finger while examining a tubercular vertebra. His life is an inspiration to every medical student and physician. For a delightful account of this leader read "Laennec" A Memoir," written by Gerald B. Webb, M. D., United States delegate to the Laennec Centenary held in Paris December, 1926.

LAVAL AND PARE

Going south we come to Laval where on the Promenade de Change one sees a statue to that French master of Surgery who was born there, Ambroise Pare. Pare started life as a barber's apprentice, studying in Paris, then joining the army as a surgeon and finally becoming the greatest surgeon of his time. It is said that he was the only Protestant spared at St. Bartholomew's, this by order of the King. Pare reintroduced the use of the ligature, invented many new instruments and of interest especially in this day of automobiles, described carbon monoxide poisoning. He was a most versatile man, even writing a little book on Medical Jurisprudence, transplanting teeth and discussing flies in the transmission of disease. His "Journey's and Travels," describing his life in the army and elsewhere make interesting reading for a doctor.

CHATEAUX

France has many chateaux but in passing I want to mention the lovely country of Touraine and the Loire Valley where the six Royal Chateaux are historically and architecturally important. They recall stirring days of the struggle and rise of France. We chose Tours for our headquarters visiting Chinon where Jeanne de Arc came from Orleans to arouse Charles the Dauphin, when France was besieged by the English;—Ambois, where Charles the eighth was born and Leonardo da Vinci lived;—Chambord, where the Bourbon and Valvois Kings loved to hunt;—Chamont, the home of Catherine de Medici, is now the hunting preserve of the French President. Chenonceaux is one of the loveliest of the Chateaux with a magnificent avenue of trees leading to it. It is now one of the many homes of Menier the French Chocolate King. These are but a few of the more prominent Chateaux and to us fascinating because of the thrilling history they recall.

From Laval our route takes us to Angers with its Cathedral where one may see some of the finest tapestries in Europe. There also is the castle with seventeen towers where the good King Rene was born. In the old Hospital St. Jean built

by Henry, seventh of England is the Archaeological Museum. And on for the night at Samur where the French government had its world renowned cavalry school. Tours was the home of Descartes who wrote "De Hominis" in 1662, said to be the first European text book in physiology. Another son of Tours was Honore Balzac whose book "The Country Doctor" in his great series entitled the "Humane Comedie," is a story of a doctor working among the Cretins in a little French village.

BORDEAUX

Then via Poitiers and Angouleme both towns with much of historical interest. We arrived early in the evening at Bordeaux, where we had dinner at the famous restaurant "Chapon Fin,"—like dining at the bottom of the sea. Bordeaux is one of the busiest towns in France with a great wine trade. In the grand hall of the "Faculte des Letters et des Sciences" is the tomb of that great man Montaigne. Have you read "Montaigne and Medicine" by James Spottiswoode Taylor? This is the Essayist's comments on contemporary Physic and Physicians, his thoughts in many material matters relating to life and death; an account of his bodily ailments and peculiarities, and of his travels in search of health. It is a story of a man's sufferings at the hands of many doctors.

From Bordeaux we drove for a long summer's day through the district known as "Landes", a great tract of land reclaimed from the Marshes and now a forest preserve. This is the land of the Basque where the Beret came from. The Beret is now very popular in this country with the motoring youth. It's a land in which to be lazy and in which to loaf and to invite one's soul.

Night found us in Biarritz, the gay seaside resort. Next day we drove into sunny Spain, visiting San Sebastian, the seaside resort of Spanish Royalty, then out to Monastere de Loyola, where that great priest once a soldier, and founder of the Society of Jesus, was born. The ride along the sea and up the mountains was delightful.

ROUTE DES PYRENNES

Leaving Biarritz, we proceeded along this route, one of the finest in Europe, up and down over famous passes like the "Col de Osibique" coming into one of the thermal spas with the odd name of Angeles Gazost. Here lived the Dupre family, one daughter Sophie became the mother of Marshal Foch. The next day found us motoring into that Mecca of thousands of

Pilgrims who go there in search of health and happiness, Lourdes.

LOURDES

Picture a small town nestling among the foothills of the Pyrennes on the banks of the river Gave. It is one of the most famous of all Catholic shrines. The story of Lourdes and the visions of the peasant maid Bernadette Soubirous appeals both to the believer and the non-believer. It is quite impossible to tell the wonderful story here. Any medical man visiting Lourdes should go to the Medical Bureau where the records of the cases are kept. Here one may not only examine the records but sometimes see the cases themselves, the buildings such as the Basilica, Crypt, and the Rosary Chapel are magnificent structures. It is a place to ponder over. For a sympathetic account read "The Wonder of Lourdes" by John A. Oxenham, an Englishman and Protestant. An enlightening guide entitled, "Lourdes" gives one the story of the town and the maid. The medical part is taken care of by a volume entitled, "The Facts of Lourdes, The Medical Bureau", by Dr. A. Marchand.

A short run took us to that weird place in the mountains called, The Cirque de Garvarine and driving over another high pass the "Col des Tourmeplet", we arrived at the little town of Luz where we visited one of the few fortified churches in the world known as "Eglise de Templar", or the church of the Knight Templar. Linked up with this church and its bricked up door at the rear is the story of those queer people known as the Cagots or Cretins as we know them. In those days they were not permitted to mingle with other people, and were only allowed to do wood cutting and butchering. Even in going to church they entered the rear door and were separated by a railing from the congregation. Communion was administered by means of a long stick.

Continuing our way by Tarbes and St. Gaudens along the great mountains through peaceful little French villages and lively little Spas through Montreal, Foix and Mirepoix, the last an interesting example of a type of town called "Bastide" or a made to order town of olden time. They were built for military purposes. And now we come to the second wonder of France.

THE CITY OF CARCASSONE

The glory of Carcassone is its walls which give the beholder the true picture of

the walled town. We inspected the outside and the inside of the town, and its dirty and smelly but unique and intriguing streets. The story of Carcassonne is long and warlike, coming up through the time of the Goths, Visigoths, Moors, Romans to the French. Thanks are due to the fine work of restoration by Viollet-le-Due, the great architect. Inside the walls is a fine but expensive hotel where one can rest and absorb the atmosphere of medieval times.

We are now in Provence, the land of the Troubadors with its memories of the singers and poets of early days. At Nimes, Arles and Orange are the finest Roman remains in France. On we go over the fine roads and at evening enter the walled city of the Popes—Avignon on the Rhone. Here we visited the great palace of the Popes, the garden and the famous bridge. Avignon brings to the physician the story of that great surgeon, Guy de Chauliac, who is described in a fine article entitled "The Public Looks at Pills" by Agnes Reppler in the *Atlantic Monthly*. Guy de Chauliac was Papal Chamberlain at Avignon and the first surgeon of his day. He set the seal of glory upon his name when he stuck to his post during the ravages of the Black Death in 1348. His *Chirurgia Magna* is the treasure of the antiquarians, his *Admonitions to the Physicians* equals, if it does not surpass the noble work of Hippocrates. But because he practised what he preached, because he saw half the population of Avignon swept away, and stayed to heal the other half, his memory is honored of men and his soul "beacons from the abode where the eternal is."

Avignon has a great and varied history. Long before it belonged to France, Joanne of Naples sold it to the Popes who held it for 450 years until the French Revolution. Its mighty mass of architecture is now being restored. A fortress and shrine in one, with walls thirteen feet thick, eight gateways and thirty-nine towers, the whole city is surrounded by a wall and here the Popes lived and dominated the Rhone valley. It was in the great audience chamber of this palace that the much married and beautiful Queen Joanne of Naples pleaded her cause before Clement the Sixth for her conspiracy in the murder of her husband, the King of Naples who owned Avignon. She was vindicated by Clement to the rage of her accusers and her pardon was purchased by selling Avignon to the Popes. An interesting book entitled, "The Pope of the Sea," by Vicente Blasco Ibanez gives

a realistic picture of life in Avignon during the time of the Popes. And all lovers will remember that Laura and Petrarch lived in Provence.

One of the outstanding figures in Provence life is Frederick Mistral, poet and writer who did more than any other to revive and protect folk-lore, history, customs, and legends of France than any other one person. In the early days his family took their name from the great wind that sweeps down from the lower Alps over Provence, called the Mistral. The country changes completely as we go south, almond, olive, and orange trees grow in abundance. The soil becomes sandy and more rocky, huge masses of grey stone on all sides make a rather melancholy landscape. We are now on our way to Les Baux, a phantom city high up in the white chalk cliffs that were once washed by the Mediterranean. The road zigzags up and around until we are in the dead city built on the rocks of the hillside. In the Middle ages the Counts of Les Baux were great feudal lords, descendants of King Balthasar, the wise man. Their court at Les Baux was the center for the Troubadours, the most powerful city of Provence at that time. This once flourishing town has crumbled into ruins with a population today of sixty people, weird and fantastic, we gazed off in the distance where Hannibal trekked the first elephants from Africa to these shores. It has been described as "like a rat in the heart of a dead princess feeding apparently on Gaulish tibias, skulls of Roman soldiers, dead cats, a stone period and miscellaneous assortment of rusty iron."

We spent the night at Aix-en-Provence. Everyone has heard of the good King Rene. This was his capitol. Up and down the country he built churches, castles and stimulated the cultivation of the vine, everything to do with the development of France. It was he who first introduced music in churches, wrote poetry, drew maps and painted church windows. Aix was the Royal town of Provence and for six hundred years the capitol, quite independent of France. The next day on our way we stopped at Brignoles where we lunched under gay colored umbrellas at small tables on the lawn. We were interested in watching the head-waiter very skillfully catching live trout from the pool and in a short time the fish, deliciously cooked, were served to us.

SAINT-MAXIMIN

Of the many interesting towns we visited, Saint-Maximin, the presumed burial place of Mary Magdalene, is unusual. Legend tells us after the resurrection of our Lord, the Jews became greatly incensed at the rapid spread of Christianity. Mary, Martha, Mary Magdalene, Lazarus, Mary the Mother of James and John with her colored servant Sarah, Joseph of Arimathea, and others were thrown in an open boat, without oar or rudder, and cast out to sea where surely a horrible death awaited them. For weeks they floated on, the winds finally blowing them to the friendly shores of Provence and from here the faithful followers went out to preach the Gospel. Maximin, one of the disciples, became first Bishop of Aix, and was buried at Saint Maximin. Martha and Lazarus were buried at Marseilles, Joseph of Arimathea crossed to Glastonbury and was the first to take Christianity to the English shores. Sarah the colored servant became the patron saint of the gypsies and to this day in May the gypsies come from all over Europe to worship at her tomb and elect their Queen.

THE COTE D'AZUR

Driving south we passed through Montpelier, famous for its university. It was here where Balard discovered bromine in 1826, in the waters of the Mediterranean. And now we come on the ever beautiful, blue Mediterranean. Many have probably seen the French and Italian Riveras, lovely beyond description, the deep blue, blue of the sea, the gorgeous flowers, magnificent villas and hotels. We took the coast road called the Corniche through Cannes, Menton, Monte-Carlo making Nice our headquarters. A short distance from Nice over the George-du-Loup we motored to Grasse, the perfume center of the world. These valleys are covered with every kind of flower, tons and tons of them. Catherine de Medici is supposed to have started the perfume industry here. The base of every perfume has to have one of three animal odors, musk from the musk-deer; skunk from the Canadian skunk; or ambergris, the gray-white substance thrown up by the whale. Fishermen count it a lucky day when they find ambergris floating on the ocean. It is of disagreeable sweetish odor, found in quantities varying from one-half ounce to 100 pounds, worth many thousands of dollars. With one of these powerful animal odors as base, tons of rose petals are added distilled together, making

about two ounces of real perfume. Therefore the high price of good perfume. Some of these flowers are distilled through pure white lard and from that fat comes the lovely scented soaps. It is estimated the United States spends 177,000,000 dollars on perfume a year.

Along the rough Italian roads we motored to Genoa, the city of arcades, and the home of Christopher Columbus. Then to Milan, seeing again the lacy Cathedral and the famous painting, "The Last Supper", by the great painter and anatomist, Leonardo da Vinci. I wandered through the Ospedale Maggiore, a great city hospital of ancient type is used for teaching purposes. All the hospitals have a chapel as part of their equipment.

At Como we lunched at an outdoor cafe overlooking the lake. Here we received our first lesson in spaghetti eating, watching an Italian make way with a huge platter of the steaming food. In the square is a statue to Alessandio Volta who was born here. He was a professor at Pavia in 1778-1819 and was famous for his work in electricity. Voltaic pile was devised by him. He showed that a muscle can be thrown into continuous (tetanic) contractions by successive electric stimulation. At Pavia between Genoa and Milan is the oldest university in Europe. On the medical faculty was Luigi Sacco who introduced vaccination into Italy in 1799.

Night found us at Bormio, an old Roman hot springs high up on the mountain side. This is a fine place to rest, looking at the mountains and scenery. Here is the highest motor road in Europe, the Stelvio Pass. Much of the terrific fighting in the great war occurred here between the Italians and Austrians. The scenery at the summit is indescribable. Coming down from the Stelvio, we pass from Italy into our sister republic in Europe.

We enter Austria via the Tyrol with its wonderful peaks, pleasant valleys, hospitable inns, thatched cottages and picturesque costumes which have an appeal for all. The trip by auto through highways across the snow covered mountains, past countless castles and through prosperous valleys and quaint towns unrolls a panorama of absorbing interest. "A Wayfarer in Austria" by G. E. R. Gedy, who was the London Times representative in Vienna, is a fine book for the visitor to Austria. Passing Stamm with its famous Cistercian Abby, we motored along the beautiful valley of the River Inn and arrive at Innsbruck.

INNSBRUCK

A fine old town with memories of Andreas Hofer, the George Washington of the Tyrol. His life story with its struggle for freedom from the French is as thrilling as a novel. Here is a medical school and hospital that attracts students from outside of Austria. A visit to Bad-Gastein, one of the famous Spas and we enter Styria to visit our friend Hugo Haas, at his home, the Traunmuhle (mill on the Traun). From a medical viewpoint this is one of the greatest goitre districts of the world. I have the pictures of two and call them the goitre man and wife. They are painted on tin and the picture is over a hundred years old.

Styria is also known as a region where there are many arsenic addicts, using arsenic the same as others do cocaine and morphine. There is an old superstition that it is good for impotence and the women use it to produce abortion. In all suspicious deaths a hunt is made for arsenic. Some of the people can take quite large amounts without apparent damage.

I ran down to Vienna for a few days and dropped into the A. M. A. Alserstrasse 9, which was as busy as usual. If one is



Coin with Billroth's Image and Superscription.

interested in post-graduate work in Vienna, write to the A. M. A.-Wien and ask for a copy of the Blue Book. This gives all the necessary information and is a great help to have before visiting Vienna.

The Austrian-American Institute gives courses in German, as well as excursions to interesting places and lecture courses in English by experts in various fields. Vienna for many years has been the mecca for American physicians although the English, French, Germans, and Italians are now offering courses. I love Wien with its

old Allgemeine Krankenhaus, its modern hospitals, clinics and museum, besides its wonderful government buildings and gardens—its music, art and charming people. Vienna is the only city in the world having a socialist government. Some interesting experiments are being carried out in housing people. The new municipal dwellings are marvels in equipment and the rental charged is very low.

Austria this year has issued a two schilling coin in memory of Billroth—the great surgeon. This is the first time I have ever seen a doctor's head on a coin. Isn't that a fine tribute. Read: "The Vienna That is Not in the Baedeker," for an amusing account of Vienna life. From Vienna we go via the lovely Semmering Pass to the capital of Styria.

GRAZ

Here you can see one of the finest hospitals in Europe, the Landes Krankenhaus. In this provincial town, rarely visited by foreigners, is I think one of the best places to do post-graduate work provided one speaks German. Dr. John, one of our own doctors, has just returned from doing work at Graz and I am sure he would be glad to give details regarding the opportunities there. Leaving our home in Austria we motored through beautiful mountain roads down into the old town of bishop warriors.

SALZBURG

Buried in one of the old churches of Salzburg lies that strange genius of medicine, Paracelus. He was a great man and will be appreciated more in the future. A shatterer of idols, a blustering half mystic type, he gathered knowledge from old wives, gypsies in country and town. What a life he had, it's a fascinating story. Did you ever read what he said about sleep? "Sleep is the chiefest thing in all Phyick." "The fittest time is two or three hours after supper when as the meat is now settled at the bottom of the stomach, and it is good to lie on the right side first, because at that side the liver doth rest under the stomach, not molesting anything, but heating him as a fire doth a kettle that is put to it. After the first sleep it is not amiss to lie on the left side that the meat may the better descend, and sometimes again on the belly, but never on the back."

Salzburg is also the birth-place of Mozart and the "Festspiel" town where that theatrical genius Max Rheinhardt puts on his great performances like "Jederman" "The Miracle" and others.

We enter Deutchland going to Munich,

one of the finest towns in Europe. Here the spirit of the "Gemutlichkeit" is more apparent than in any other part of Germany. Music, Art, Opera, Theater, Medicine, one can obtain his fill in Munich. The greatest museum, the Deutsches Museum, is here; also a fine pathological museum open to the general public. The comic German papers, *Simplicissimus*, *Flugen Blatter*, *Jugend* and others are published here. In the hospitals and clinics, renowned teachers are ready to teach the latest method in medicine. A good place for post-graduate work but one should have a good knowledge of German.

AMERICAN STUDENTS AND GERMANY

President C. F. Thwing has just published an interesting book, "Americans and the German University—One Hundred years of History." We read about Franklin's visit to Gottingen in 1766; we accompany the Harvard men, Everett, Tichnor, Bancroft and Cogswell to Gottingen in the beginning of the 19th century. Since that time 10,000 American students have been enrolled in German universities, one-half of them in universities in Berlin. Germany offers every variety of instruction. An excellent paper in English entitled "German Universities" can be had from the German Railroads—New York City. American students in Berlin will be assisted in the matter of the matriculation by the Amerika Institut, Berlin.

The consensus of opinion regarding post-graduate work in Germany is that the smaller universities offer the best opportunities for work—just now there are comparatively few foreign students in Germany. Only about 164 Americans are studying there. The reason given is the reactionary attitude of the German students; many of the student groups are said to be hostile, which seems strange when the rest of mankind is seeking peace. Nearly all of the universities have summer courses for foreigners.

From Munich we motored straight to Augsburg the first town in Europe to have a waterworks and here the first fire engine was made. Through the beautiful scenery of the Black Forest, we motored to Freiburg, the town of the "Dammerschlaf" or "Twilight Sleep" which was originated in the University Clinic. The Black Forest is formed by a chain of densely wooded hills and mountains and the landscapes are of exceptional beauty. Magnificent forests of fir and pine trees make this one of the finest health resorts in the world. The

population consists of typical peasants and mountaineers mostly in their quaint native dress. Baden-Baden is another delightful "Spa" town which makes one want to linger, drink the water and listen to the good music so universal in Germany. Through Karlsruhe we come to that romantic town beloved by students.

HEIDELBERG ON THE NECKAR

Renowned in education, history, music and fiction. The duels are still carried out in an old tavern just outside the boundaries of the university grounds though strictly forbidden within. We saw many students with freshly made scars. Heidelberg has many famous medical authorities, and is well known for the fine Cancer Research Institute. It also has summer courses for the foreigners in the university founded by Prince Rupprecht in 1386. The student's prison with pictures of its former inmates is worthy of a visit and of course everybody goes to the ruined castle, of which Longfellow said "Next to the Alhambra of Granada, Heidelberg is the most magnificent ruin of the Middle Ages."

From here we motored via Mannheim to Weisbaden, the lovely watering town, then to Darmstadt, where great chemical works of Mercks are located, then on to Frankfurt on the Main.

In exploring "Alt Frankfurt" I found on an ancient building this inscription:

"In disen haus winde 1683

Lorenz Heister geboren

seiner Zeit groester chirug Europos"

The greatest European surgeon made the first postmortem section of appendicitis, introduced the term "Tracheotomy" and wrote a "Chirurgie" valuable because of its instructive illustrations. This was the most popular surgical work of the 18th century says Garrison. Frankfurt was the home of the wealthy Rothschild family, of Goethe, Germany's greatest poet, and of the noted medical historian Karl Sudhoff. It was in Frankfurt's great chemical plants that Ehrlich was able to work out salvarsan. Contrary to the general rule in Germany the people of Frankfurt do not drink beer but cider, and they eat wurst instead of Frankfurters. A great hospital and medical school are part of the University of Frankfurt. From a tourist's point of view, it is the most interesting city in Germany.

German Spas, the classic land of the Spas and health resorts. The "cure" as the treatment in the Spas is called is much more used in Europe than in America. The

English, French and German physicians continually prescribe the Spa for treatment. In each Spa there is a recognized list of physicians who direct the cure. Germany's forests, lakes and mountains and two sea coasts all add to the health resorts. The Baltic Sea sheltered by pine woods is most soothing while the North Sea has a powerful surf and appeals to the type of people who love the tang of the sea. As for the healing springs there are multitudes. Beside treatment are all sorts of entertainment, beautiful gardens, parks walks and every known sport, and even churches. Thus body, mind, and soul are catered to with that characteristic German detail. Some of our home resorts might copy with profitable results the methods used all over Europe.

Along the Rhine, legends, haunted ancient strongholds, beautiful vineyards, picturesque villages, venerable towns full of superb art treasures, magnificent cathedrals, stately castles, such is the story of the Rhine, much lovelier by motor than by boat. It is the most important river not only in Germany but in Europe. If one reads the legends of the Rhine he will enjoy the trip much more. After breakfast in Frankfurt, lunch at Bingen, we had our tea at Coblenz where the American Army of occupation was located, and dinner in Cologne. From Cologne we drove north to see something of the industrial center of Germany. Essen, the home of the Krupp Works; Dusseldorf, a fine city with beautiful parks and fine art gallery, to the ancient city of Aix la Chapelle Charlemagne is buried. The Germans call it Aachen and here we crossed the border into Belgium.

"*Omnium fortissimi sunt Belgae*", wrote Caesar of the inhabitants of the land. History repeated itself in the Great War for it was the Belgians who upset all the calculations of the Germans. This little country has a long record of war. In 1831 it became an independent kingdom. It is a land of churches, belfries, hotel de villes and Halles. Its art history is that of the great masters. There are four universities, among them Louvain, the destruction of which will always be remembered. The new library built by American friends is one of the most beautiful of its kind in the world. Our first stop was at Spa, which has given its name to every other watering place. Here the Imperial Army had their headquarters and you can see in a villa outside the town the massive bomb-proof underground shelter built for the

ex-Kaiser during air raids. Spa is the oldest of all health resorts devoted to the drinking of medical waters. The virtues of the waters were discovered by Augustine, Venetian physician to Henry VIII. Our way lay via Liege, Namur and Dinant, each showing scars of the late world's war. On through the Ardennes the lovely forest region of the Belgiums and then to Brussels.

Brussels is a little Paris. Here we enjoyed the opera every night. The hospital of St. Jean has the front of the building plastered over, with wall plaques giving names of its benefactors. In the chapel are fine paintings. One day we motored out to Malines to hear the carillons and to see the Palace of the Archbishop Mercier, that noble figure so heroic through the German occupation. From Brussels we drove to Antwerp where I visited several of the hospitals, inspected the famous Musee Plantin, where many of the early medical books were first published.

Between Galen and Harvey in European medicine, says Garrison, stands Andreas Vesalius. He was a son of Belgium, a Fleming by birth. So to Belgium besides its valiant spirit in war we owe one of the greatest advances in medicine, the masterly work of her son. "*De Fabrica Humani Corporis*," published in 1543, one of the finest books of this great personality with many illustrations, was again published by the English drug firm, Burroughs Wellcome Co. When one visits London he should spend a day in one of the greatest of all medical museums, owned by this company.

Antwerp has of course some of the finest paintings in Europe; is also one of the largest ports, due partially to its being the market for the produce of the Belgium Congo. A three days fete was on when we were there, street music day and night, the people dancing till the wee hours of the morning, we simply couldn't sleep and were glad to be on our way sailing down the Scheldt, fifty-three miles to the sea. Behind huge dykes we can see the red tiled Dutch roofs and old wind-mills in the distance. Back to the memories of the little Dutch lad who saved Holland by plugging the hole in the dyke.

When one goes abroad let him remember, "He that would bring back the wealth of the Indies must carry the wealth of the Indies with him." In other words be prepared by reading up on all one intends to see.

And so we come to the end until the urge comes again.

"I must go down to the sea again,
 For the call of the running tide,
 Is a clear call and a wild call
 That may not be denied;
 My roving heart must follow
 The rover's long desire.
 Because I have not quenched it,
 That spark of wander fire."
 —The Running Tide.

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THE INTER-RELATIONSHIP BETWEEN DERMATOSES AND INTERNAL DISEASES*

R. C. JAMIESON, M. D.**

DETROIT, MICHIGAN

One cannot investigate a question of this kind to any extent before an apparently paradoxical situation becomes evident, namely, that many dermatoses of various types are found to be either directly or indirectly related to disturbances of internal organs—either organic or functional—but that there are very few definite diseases of such organs that give rise to consequential dermatoses as a direct result of such disease.

It had been my intention to discuss only the latter relationship, but on investigation the subject matter was found to be so scanty and indefinite that the scope of the paper was enlarged to include as much as was practical of both sides of this inter-relationship.

While there are many dermatological diseases which are of internal origin, they are of the varieties that can be traced to infections of bacterial origin, to medication, to toxins due to the introduction of food, etc., and need not enter into the discussion.

In order to simplify the question, the dermatoses related to internal diseases may be conveniently grouped into general divisions: 1st. Those which are known to be due to such disease. 2nd. Those which probably are due to such causes, but whose etiology is not definitely understood.

In scanning the dermatoses which are definitely related to diseases of internal organs, it is at once apparent that there are almost none, although the probabilities are that many are so related, but not proved. The skin changes in jaundice with the accompanying pruritus are well known, but this cannot be strictly considered a dermatosis. Pancreatic disease, however, manifested as diabetes, is, in most cases at least, the etiologic factor in the production of lesions of xanthoma diabeticorum—the small, reddish, papular lesions, capped with a chamois-yellow top which appear by predilection about the elbows, knees and buttocks. These patients are glyco-

suric subjects, are generally stout and are quite readily cured by correction of the glycosuria. In some instances lesions coalesce and become large and nodular depots of fat, and not cholesterol as Wile and his associates have shown. When these patients are placed on a diabetic diet, absorption of these fat depots occurs, only to return when a normal diet is resumed.

In connection also with diabetes is the well known tendency of these patients to have a low resistance to pyogenic bacteria, often resulting in severe furunculosis or carbuncle. In women especially there may be a severe pruritus of the genitalia due to irritation of the glycosuric urine and to local irritation and decomposition—all of these dermatological lesions, however, readily yielding to treatment upon correction of the underlying primary diabetes.

If one may consider the blood and hematopoietic system as one of the internal organs, the diseases of this first class may be considerably enlarged as there are several dermatoses which can be definitely connected with changes in the elements of the blood.

In leukemia cutis, either with or without a change in the leucocytosis of the blood, there is a variety of dermal lesions—often a severe pruritus preceding or accompanying the cutaneous manifestations, and in some cases being the only subjective symptom present, appearing then as an essential pruritus. There may even be an absence of leucocytosis and lymphadenitis and the

* Read before the Toledo Academy of Medicine April 19, 1929.

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pruritus would appear to be of undiscovered etiology until the other symptoms of the disease appeared. This should be kept in mind in young adults with anemia, who are evidently sick but have no demonstrable dermatitis, and a careful search made for adenopathy.

The dermal lesions in lymphatic leukemia may appear in a variety of forms from maculo-papular to small nodular intracutaneous lesions that are yellowish-brown or brownish-red in color, appearing especially on the face and extremities.

If we are to accept the classification that would comprise a group of related diseases, we can include the dermatoses of this type, the skin lesions of pseudoleukemia and granuloma fungoides with its variegated lesions ranging from erythematous, eczematous and parapsoriatic plaques in the early stages to the fungoid tumors of the terminal phase. It is generally considered at present that there is an inter-relation between all these diseases and it has been suggested that they are all a malignant disease of the blood and can be grouped as lymphoblastomata, the essential etiology being still unknown.

Many cases that are clinically some variety of the leukemic state may be without specific blood changes even late in the course of the disease and diagnosis may be made only on section of the lesion.

The group of inflammatory diseases composed of lichen planus, psoriasis, seborrhoeic dermatitis, eczema and dermatoses that are a mixture of these diseases, embraces a large percentage of dermatoses about which little is known with regard to their etiology and relation to internal disorders.

In the case of lichen planus there are many who incline to the theory of an infectious process with a change in therapy from arsenic to mercury although some of the French still regard arsenic in the form of neoarsenobenzol as the best form of treatment. Many reports are appearing at present in which roentgen ray treatment is advised, particularly in generalized lichen planus, over the spinal area. While many good results have followed this treatment in the relief of pruritus, temporarily, at least, it does not clarify the question of etiology which may still be an infection or some change in the nervous system.

Likewise with psoriasis, it may still prove to be of an infectious nature, though there are so many reports of conflicting nature in which patients were cured or im-

proved by a wide variety of methods, that this dermatosis might almost be classed with eczema in that respect. When one considers that psoriatic lesions may temporarily disappear with such treatment as chrysarobin, arsenic, typhoid fever or vaccine therapy, ultra violet or X-ray therapy, thymus stimulation, various gland extracts, removal of foci of infection in teeth or tonsils, dietary changes, climatic changes, etc., it does not seem possible that it can be due to any single agent of an infectious nature. It should also be remembered that there may be a familial tendency to develop the disease, but it is never transmitted by external contact. It might be considered as a parakeratotic change in the superficial epidermal layers, this change being the result of some disturbance of the central mechanism of the skin control with an underlying toxic state due to possible endocrine change or focal infection.

While seborrhoeic dermatitis is not considered a very important disease in general, it is quite capable of becoming extremely annoying. A case that is clinically seborrhoeic dermatitis may cause inflammatory areas of varying degree on the trunk, face or scalp which may last indefinitely as such, or may even change in character later into a dermatitis exfoliativa, granuloma fungoides or appear as a mixture of all the diseases of this group. If one may speculate regarding the etiology of this rebellious disease, it is possible that the cause may be an infection only, but more than probable that, granting the infection theory, there is an underlying change in either the sebaceous glands themselves or in their secretion, which allows the infection to occur. Many organisms have been reported as the cause of seborrhoeic dermatitis and its related diseases—seborrhoea, pityriasis capitis and alopecia, but the etiological relationship has not been proved. The sebaceous gland changes might be analogous to the changes occurring during puberty and might conceivably be due to stimulation of some of the endocrine glands with secondary infection by micro-organisms that might usually be considered nonpathogenic.

Eczema is still considered by many the junk pile of dermatology, but, though often a misnomer, it is still a most expressive and descriptive name for a group of diseases for which we can find no better name at present. It is also understood by the laity and many a patient is often satis-

fied to be told that he has eczema but would be horrified if told it was anything else.

One by one certain clinical types are being extracted from the confused array as the etiological factor is being discovered, the latest being eczematoid dermatitis of ringworm origin. There are still, however, a large number of cases in which the clinical symptoms are clearly of the eczematous type, but for which no cause is discoverable. That is, there are burning, itching, weeping, redness and swelling—all the classic symptomatology—but no reason for them, and it has been suggested that those cases of this group be called "eczema" if the etiology is unknown, but otherwise "dermatitis" with a qualifying adjective to explain the origin.

It is chiefly with the unexplained type that we are dealing at present as we believe that infantile eczema (most types), is due to some error in diet, an excess of sugar, protein or fat, a faulty digestion of one or the other, or a true sensitization to some one or more articles of food. If this faulty digestion or sensitizing substance is corrected or removed, the eczema is cured, but it often happens that there is residual amount of dermatitis in the cubital, axillary and popliteal spaces which remains for years and later on changes into the lesions of lichen simplex chronicus type, a neurodermite, extremely pruritic and most rebellious to all treatment and obscure as to etiology. I often feel that this is a true dermatitis of nerve origin as there are so many fluctuations corresponding to the patient's general nervous state as well as atmospheric and climatic changes—probably an indirect result.

After eliminating dermatitis or eczema due to all sorts of irritation, plant, chemical, clothing, occupation, etc., the innumerable and ever increasing cases of eczematoid dermatitis of ringworm origin, we have still to consider those countless cases in which no infecting agents can be discovered nor can any external factor be found to produce the clinical symptoms. When all other things fail—elimination of food—toxins, protection from irritation, absence of infection, lack of organic visceral disease—we still have two possible sources of the disease, namely, focal infection and a functional or organic change in the endocrine system. The possibilities of the latter are so numerous that it is quite hopeless to go into the question thoroughly, but it is quite within the bounds of probabilities that there will

come to be recognized a type of eczematoid dermatitis whose etiology will be intimately connected with the nervous system. Focal infections of all types—sinus, teeth, tonsils—should receive their due consideration, not only as direct but as indirect causative agents in the production of all dermatoses of obscure origin.

All the dermatoses in this group may be influenced by changes in one or more of the endocrine glands as shown by many reported cases in which lesions disappeared following the administration of one or more of the various gland substances—the favorites being ovarian and thyroid extracts. But up to the present we have no distinguishing clinical characteristics which would point to one gland more than another and must rely on the general symptom complex and employ the basal metabolism test for endocrine function.

Theorizing on the causal relationship between the ductless glands and dermatoses leads on indefinitely, but it is well within the limits of possibility that at some future time not only will this relationship be known, but some satisfactory method of treatment evolved whereby a hyperfunctioning gland may have its activities reduced and a hypofunction be stimulated. Some of the changes in the skin and especially the appendages are considered by many to depend on the endocrine function and others may be due to inherited defects which could not be remedied by any form of treatment known at present, among them being hyper- and hypotrichosis and ichthyosis. The latter, while probably a congenital defect, is often regarded as a symptom of thyroid change on account of the frequent dry, pruritic skin in thyroid patients, but it does not necessarily follow that a dry skin of the ichthyotic type necessitates a lack of thyroid secretion.

The symptom complex of hypo- and hyperpituitarism is well known as exemplifying the influence of gland secretion on the hair growth in producing hypo- and hypertrichosis, but while the pituitary secretion evidently plays the major part in the control of hair growth there are other factors in heredity that only can explain the excessive growth in otherwise apparently healthy individuals. Until we have some means of control of the function of this gland, those with excessive hair development must obtain relief by local mechanical measures.

One of the diseases of the hairy portions of the body which has an unsolved etiology is alopecia areata. This lesion appears as a

rule more or less suddenly, in small or large rounded areas, single, multiple or even generalized—rarely universal. The skin of the areas involved may be pinkish but appears normal otherwise. It has been reported to have occurred in otherwise healthy individuals who had been subjected to severe nervous strain, shock or fright, the lesions developing soon after. The mode of epilation suggests a nerve disturbance as the immediate cause of the alopecia—possibly comparable to the action of thallium acetate—and one might readily conceive of some unknown infection which could act on the nerve trunks supplying the affected areas. Toxins from focal infections of teeth and tonsils as well as dental fillings have been suggested as possible causes. The endocrine function may be at fault in the severe generalized cases in which the hair does not return or returns only partially.

Changes in the pigment of the skin are very little understood etiologically, but are generally regarded as secondary to internal changes of some type—probably in the adrenals. Albinism and vitiligo are probably due to heredity and a possible trophoneurosis respectively, though heredity may be a possible factor also in vitiligo. Aside from the known fact that a vitiligo at times is due to syphilis or will sometimes follow a secondary syphilitic exanthem, there is nothing known of the etiology though one may argue that it may be a converse problem of increased pigmentation in which certain internal organs may be at fault—namely, the uterus and adrenals. Involvement of the adrenals may also be accompanied by generalized pigmentation as in Addison's disease, and in the majority of instances of acanthosis nigricans and there has been an associated cancerous involvement of the abdominal sympathetic system or viscera. According to Darier's theory this is accomplished by intraperitoneal pressure which implicates the nerve structures of the sympathetic system and interferes with their normal function. The type of pigmentation mentioned in connection with Addison's disease is often referred to as a bronzing of the skin and is chiefly on covered portions of the body, in contradistinction to the bronzing of the skin on exposed surfaces which may be encountered in diabetes.

A rather common yet very distressing dermatosis is urticaria, common "hives", and with its usual etiology has no place in this discussion, yet the chronic urticaria is often due to internal disorders of a very

obscure type. Ordinarily depending upon sensitization to one or more foods, urticaria promptly disappears upon removal of such foods or toxic substance circulating in the blood. The type that causes the greatest difficulty, however, is that which appears at any time, regardless of food toxins and has an etiological factor which remains undiscovered even after refraining from all possible foods and having all manner of skin sensitization tests performed. If allergy be eliminated as the cause, there remain two other factors, nerve exhaustion induced by emotional, physical or mental exertion, or thyroid intoxication—either together or singly. We are all unfortunate enough at times to encounter these cases and the sufferer continues to scratch until it is discovered that a rest cure or removal of a toxic thyroid had eliminated the pruritus. One report is made of disease of the biliary tract being the cause of urticaria in 50 per cent of a series, the cause of an additional 30 per cent of the same series being definitely determined by sensitization tests. Of a similar nature to urticarias of this type is that intensely pruritic disease, dermatitis herpetiformis, appearing in groups of small and large vesicles distributed generally over the body and limbs. Mental strain, shock, nerve exhaustion, worry are all factors in the production of this disease and it often occurs that the functional cause is proved by cure after the nervous system has returned to its normal functioning state following removal of the mental stress.

In an increasingly large number of dermatological diseases we are not content to treat the lesions and regard them as purely local manifestations, but we attempt to go a little farther and try to connect the dermal lesion with probable or possible internal functional or organic change. In all cases, however, the inter-relation is variable, very vague in some, in others quite pronounced and very evident. This is true in rosacea, with or without acneform lesions, as most cases are due either entirely or chiefly to some disturbance of gastric digestion. In at least half the cases there is a hydrochloric deficiency and administration of this drug produces improvement or cure in even more than that proportion. In addition to local treatment, the cure of rosacea depends upon the discovery and cure of the gastric abnormality.

In essential pruritus it may be of interest to note that the sweat of patients with pruritus has a higher sodium chloride, urea and uric acid content than normal and

that the sweat glands act as a substitute for the kidneys. It is also suggested that this type of pruritus could be treated by diuretics, restriction of sodium chloride, meat, etc. In general, however, pruritus is symptomatic only.

In passing from probabilities to possibilities, we have open an inexhaustible field for conjecture, especially when we consider the relation of dermatoses of unknown origin to some possible endocrine change. Many dermal changes occur with sufficient frequency to enable us to link them with one or more endocrine glands, but with the interdependability of these organs, one cannot say that disease of a single gland is the etiological agent.

A dry, lusterless skin, drying and loss of hair with dry, rough, friable, ridged nails are often seen as an accompaniment of a hypothyroid function. A hyperfunction, on the other hand, may be attended by a thin, warm, smooth and moist skin with a tendency to transitory erythematous areas on the neck and upper chest.

Changes in the pituitary secretion are also credited with a possible relationship to scleroderma and vitiligo and at puberty the endocrines play a part at least, in the production of acne vulgaris by producing oversecretion of the sebaceous glands, the lesions being then subjected to the concomitant action of the acne bacillus and the staphylococcus.

Considering the comparatively large number of individuals with pulmonary tuberculosis, tuberculous lesions of the skin are very uncommon resulting from the primary focus in the lung. Lupus vulgaris

may have a possible origin in pulmonary tuberculosis, but scrofuloderma, tuberculosis cutis orificialis, the toxico- or para tuberculids (including acnitis, lichen scrofulosorum, lupus erythematous disseminatus, erythema induratum) I believe are generally admitted to be present in tissues of a tuberculous subject, though not directly tuberculous.

In a consideration of this inter-relationship from the viewpoint of the internist, it does not necessarily follow that a gastric or abdominal carcinoma of any type must be accompanied by acanthosis nigricans, Addison's disease or any pigmentary change whatever. Diabetes may run its course for years, even to its termination, without any dermal lesion ensuing, the kidneys probably would never cause any dermatoses in spite of marked disease, the intestines are not incriminated except as the seat of a toxemia, nor is the liver except as the originator of jaundice. The uterus and ovaries although often diseased are seldom mentioned as factors in dermatoses and with the exception of pulmonary tuberculosis, the lungs are innocent.

Eliminating the more or less acute diseases in which we feel confident a bacterial or fungous organism is the active cause, there remains a large number of obscure dermatoses, some serious, some of minor or only academic importance, which we in our present state of knowledge can only say have an unknown origin or are due to some unknown obscure endocrine dysfunction. Only time and the investigations of his slave, man, can tell whether these conclusions are correct and the problem Q. E. D.

ETHICS IN OPHTHALMOLOGY

We are living in an advanced age asserts Edward B. Heckel, Pittsburgh. Progress is so rapid that it seems wise to pause for a moment in this mad rush to indulge in a bit of introspection. While we progress in material things we should not lose sight of the fact that certain fundamentals are as a solid rock, firm and stationary. We must ever remember that we belong to an honorable profession which has for its chief function service. Our profession is not a business, for the chief function of a business is to make money. If a business does not make money, it fails and falls by the wayside. Sometimes Heckel fears that spirit of commercialism which inspires an occasional colleague to take advantage of many appliances and apparatuses of precision, using them only for their psychic effect on their clientele rather than for the practical, scientific benefit of the patient. No matter what is done or what is given, as long as it is for the benefit of the patients, it is proper and ethical; but if any of this is done solely for one's own benefit or for the benefit of one's purses, it becomes blatant quack-

ery. What is good ethics for the East is, and should be, good ethics for the West, the South or the North; yet it is to be regretted that the profession is not a unit on this subject. In the medical society a man's colleagues may have an opportunity to judge him and properly classify him. The proper place for the physician to begin to bring himself to the attention of his colleagues is in the local county medical society, which, after all, is the foundation of medical organization. When a man is able to do his work a bit better than his neighbor, the world will be ready to take notice of him and his proper reward will follow. The optician occupies an important place, but he should stick to his last and maintain his proper relationship to the medical profession just as the druggist or pharmacist does. Is it not time for us, as members of this section of the American Medical Association, to rededicate ourselves to the noble principles of right, justice and ethics laid down by our illustrious predecessors?—Journal A. M. A.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., Commissioner
LANSING, MICHIGAN

THE NINTH ANNUAL PUBLIC HEALTH CONFERENCE

The Ninth Annual Public Health Conference will be held in Lansing on January 8, 9 and 10, 1930, with headquarters at the Hotel Olds.

Each year for the past eight years the Michigan Department of Health and the Michigan Public Health Association have joined in conducting a conference intended primarily for community leaders in public health. The average attendance of 300 has been made up of physicians, health officers, public health nurses, and interested laymen. Effort has always been put forth to include on the program topics of especial interest to each of these groups.

This year there will be three symposium programs, one on diphtheria prevention, one on meningitis control, and one on school health problems. These were purposely arranged to give opportunity for expression of local opinion and experience. Health officers and public health nurses from various sections of the state will discuss the topics from the viewpoint of their communities.

So much interest centers around scarlet fever, especially in the matter of immunization, that the Friday morning session at which this subject will be discussed by Dr. Kiefer will doubtless be one of the largest in point of attendance. Smallpox, another problem of especial concern at the moment, appears on the same program. A. Parker Hitchens, whose work in smallpox control in the Philippines is too well known to need comment, will talk about the measures employed there.

Recent research in nutritional anemia with special reference to its practical application in anemia of infancy, adolescence, and pregnancy is expected to be a popular topic. Maternal mortality in Michigan, the state's stream pollution program, the organization and administration of county health departments, health teaching in the schools, and mouth hygiene with special reference to developmental defects will be some of the other subjects discussed.

Complete program of the Conference will be furnished upon request, and physicians are cordially invited to attend any of the sessions.

RECENT TRENDS IN SERODIAGNOSIS OF SYPHILIS

Observations of blood hemolysis by Landis in 1876 and especially by Bordet in

1898 no doubt stimulated the research which eventually led to the development of the classical Wassermann test in 1906. Credit for this test, however, must be divided inasmuch as Gengou, Ehrlich, Morgenroth, Bauck, Altoff, Neisser and others published data which approach, if they do not surpass, in value those of Wassermann himself. In fact, Wassermann can claim only a very doubtful priority for his publication, as Detra published a paper on the complement fixation test for syphilis just two weeks after the work of Wassermann and Neisser appeared. For some time it was thought that the reaction was an adaptation of the then well known complement fixation reaction of Bordet and Gengou requiring only a *specific* syphilitic antigen. However, in 1907, Weygandt showed that the Wassermann antigen was not necessarily specific since positive reactions occurred equally well when aqueous extracts of normal guinea-pig spleen were used as antigen. These rapid early developments are indicative of the general trend of the efforts to improve the methods for serodiagnosis of syphilis. They have been followed by so many modifications that today we have almost as many methods as we have laboratories attempting to aid in the diagnosis of this disease.

Flocculation or precipitation methods for the detection of syphilis have a record similar to that of the Wassermann reaction with respect to the number of variations as well as to the duration of the period during which such tests have been under investigation. Michealis in 1907 reported a precipitation reaction for syphilis in which the antigen used was prepared from syphilitic tissue. Jacobstahl, as well as Bruck and Hidaka, were still employing syphilitic liver in their respective precipitation tests as late as 1911. In 1915 Hecht evolved an antigen to be employed for both Wassermann and precipitation procedures. His antigen was non-specific, being an alcoholic extract of heart muscle. Other workers, among whom Meinicke, Sachs-Georgi, Muller, Dreyer, and Ward, and Vernes are outstanding, made important contributions to the development of a dependable flocculation test. However, not until Kahn brought forth his test in which undiluted serum, agitation to eliminate incubation, and other unique features were brought into

play, did a precipitation method gain any general recognition.

Kahn's studies on precipitation began in November, 1921. From then until October 15, 1925, about 175,000 comparative Wassermann and Kahn tests were run at the Michigan Department of Health with such favorable results that on the above date complement fixation methods were replaced by the Kahn precipitation test in the laboratory of the Michigan Department of Health, an action which may be considered in view of its consequences as one of the greatest advances in the serodiagnosis of syphilis occurring in recent years. The great good which came from this radical change was not necessarily that a better test was adopted or that expenses were materially reduced, but that a precedent was established which made possible the opportunities for future research.

During the last few years the literature has been filled with reports of comparisons between Wassermann and flocculation tests. Time does not permit going into detail in these comparisons, but in order to present the problems at present confronting the workers engaged in improving these diagnostic aids, it is necessary to touch upon some of the more outstanding studies. There are two conditions which detract from the value of these comparisons as they are usually carried out. First: In a majority of instances the results obtained with a new test have been compared with those resulting from the use of a previously accepted method, usually some modification of the Wassermann or flocculation tests. Since it is certain that the best tests are far short of agreement with the clinical diagnosis it becomes obvious that the only valid comparisons must take into consideration the clinical condition. Second: It is unfair for investigators thoroughly trained in the use of one method to attempt to apply a second test in which their technique is inadequate in an effort to make a comparison. The only just procedure would be for two workers, each a specialist in his method, to work with identical material. This, as will appear in the remainder of this paper, is the procedure which has been adopted in making the major contributions of the past eight years.

Realizing the value of a comparative study of different serum reactions in syphilis, the League of Nations, under the direction of the International Conference on the Standardization of Sera and Serolog-

ical Tests, invited six distinguished workers from six countries of Europe, employing their respective methods, to examine seventy-two carefully selected sera. The following methods were employed: Wassermann, Sigma, Sachs-Georgi and Meinicke. The results were rather unsatisfactory, as may be judged by the words of the committee. "The flocculation reactions are to a certain degree superior to the Wassermann test, but, on the other hand, this comparison demonstrates the existence of great differences in the results obtained by the investigation." Because of these divergences, the Health Committee decided to hold a conference at which the investigators would be able to make tests on the same sera at the same time and in the same place. A serologic conference was held in the State Serum Institute, Copenhagen, from November 19 to December 3, 1923. This procedure of "getting together" for the comparative tests was, no doubt, an improvement over the old method, yet, as will be shown later, was not without its drawbacks.

As this first Serologic Conference in Copenhagen, the work was carried out by nine workers and their assistants from seven different countries, three being from Germany and one from each of the following countries—Great Britain, Poland, Belgium, Denmark, Austria, and France. Five hundred thirty-six sera were tested during ten working days, employing the Wassermann test with several modifications, and three flocculation tests, namely, Sigma, Sachs-Georgi, and Meinicke.

Included in their summary were the following statements: "The Bordet-Wassermann test yielded in this conference the uniformly greatest number of positive reactions in known cases of syphilis. No unspecific results whatever were obtained by certain of the investigators, and on the whole, results which were possibly unspecific occurred very rarely. The flocculation tests cannot at present replace the Bordet-Wassermann test. It must, however, be emphasized that in the course of the present conference they have yielded positive results on a certain number of cases of syphilis in which the Wassermann was negative." Therefore, the conference held in Copenhagen in 1923 has gone on record as saying that the Wassermann test is superior to the flocculation test as applied to the sera which were employed at that conference.

In 1926 under the auspices of the committee on Standard Methods of the Amer-

ican Public Health Association and under the direction of a referee, Dr. Ruth Gilbert, 252 sera were tested in seven laboratories. Included in this study were complement fixation methods as employed by the New York State Health Laboratories, and that of Kolmer, as well as Kahn's Precipitation Procedure. The results obtained in this endeavor must have been most disheartening to those who took part as well as to others, as in the terms of Dr. Gilbert, only in 100 cases out of the 252 did those laboratories employing the complement fixation methods give uniform results and all but 18 of this 100 were negative reactions. Dr. Gilbert further states that the lack of uniformity of the results of the precipitation methods used in this study far exceeds the variations in the results obtained with the complement fixation methods. Judging from the data given, the complement fixation methods fared very badly, while the precipitation methods were even worse.

Because of the value of such comparative studies, a second laboratory conference on the serodiagnosis of syphilis was held at Copenhagen, May 21 to June 4, 1928, which brought together 37 distinguished investigators from 19 nations. These workers applied 16 different methods to 944 selected sera. This being the greatest unified study of laboratory methods for the diagnosis of syphilis ever undertaken, I would like to present in some detail the results obtained. Although some of the conclusions as given at the Conference are helpful, others are of a rather general and disappointing nature. However, a careful study of the data obtained reveals some very interesting and definite results.

Following are some of the resolutions in somewhat abstracted form as given by the Conference, together with brief discussions:

1. That the best of the flocculation tests may be regarded as equal in value to the best of those which depend on fixation of complement. To me this is the truth, but not the whole truth, as I shall endeavor to bring out later.

2. That in order to secure the most reliable information for the clinician, at least two different serodiagnostic methods should be used. Among the investigators at the Conference there was a difference of opinion as to whether one of these methods should be a complement fixation test. There is no doubt but that a second test should be made routinely on all sera coming in for laboratory aid in the diagnosis of syphilis. There seems to be no reason why one of these tests should necessarily employ complement fixation. It does seem advisable, however, that at least one and possibly two methods different from the one employed routinely should be kept in readiness in order that a study may be made on any serum giving an anomalous or unsatisfactory result from the standpoint of either the laboratory man or the clinician.

3. The third resolution was that the results obtained in the laboratory should be checked frequently by conferring with the clinician. This point is well taken, although it is next to impossible to follow it out in many laboratories.

4. That a uniform method of reporting be employed. The + sign denoting positive, the negative sign (—) as negative, and the +— as meaning neither positive nor negative. No one, I think, will question the advantage of a uniform method of reporting. However, employing only the three signs to distinguish the potency of the serum probably will meet with opposition, especially in this country, where it seems that the tendency is in the opposite direction, if we may judge from Kolmer's

COMPARISON OF TESTS ON THE PERCENTAGE BASIS

Summary of All Tests								
Clinical Syphilis					Non Syphilis			
	++ +	+—	++ +	—	++ +	+—	++ +	—
Complement Fixation.....	44.11	12.26	56.37	43.63	3.48	5.83	9.31	90.69
Flocculation.....	25.70	8.95	61.65	38.35	.61	3.77	4.38	95.63

COMPARISON OF INDIVIDUAL TESTS—SELECTED

	++ +	+—	++ +	—	++ +	+—	++ +	—
	Clinical Syphilis				Non Syphilis			
1. Harrison.....	41.84	15.55	57.39	42.61	0	2.75	2.75	97.25
2. Wyler.....	61.12	6.61	67.73	32.27	0	1.15	1.15	98.85
2. Kahn.....	63.54	9.01	72.55	27.45	.23	2.31	2.54	97.46

1. Complement Fixation.
2. Flocculation.

method of reporting, or from the quantitative aspect of Kahn's procedure.

Four other resolutions were given by the Conference, but are not reported in this paper because of their lack of importance.

In order that we might get a condensed picture of the results obtained at this Conference, totals were made of all the complement fixation methods and of all the flocculation methods, and comparisons made on a per cent basis, as shown in the above chart. Like comparisons were made between the best of the complement fixation methods and the best of the flocculation, as will also be noted in the above chart. Two flocculation methods are listed because of the difference of opinion as to which was the better.

Whether the strongly positive alone or the strongly positive plus the weakly positive are considered, the flocculation tests gave the most positives in those cases which were diagnosed as syphilis, and the least number of positives, when considering cases of non-syphilis. Therefore, the superiority of the flocculation tests on the sera studied at this conference is evident, and this is true whether the tests are considered collectively or whether the best of each are considered separately. However, it has been said in this country that the complement fixation methods employed at this conference failed to incorporate procedures that have been found to insure accuracy of results, and that had the Kolmer modification been employed, results would have been different. Whether this is true or not must be left to future conferences at which this or other American modifications are represented.

I would here like to quote statements of a prophetic nature from two leading serologists, one an exponent of complement fixation, the other an ardent supporter of the flocculation test.

Kolmer—"As far as my own experience is concerned in serology and likewise in clinical syphilology, I believe that there is still a great need for the complement fixation test."

Meinicke—"Some of the members of the Conference, (referring to the Copenhagen Conference last year), were already in favor of the flocculation test and against keeping the Wassermann test, and it was the impression at the Conference that, though the time has not come for discarding the Wassermann test, the probability was that we could do so, perhaps at the next conference."

It seems to me that the complement fixa-

tion method is and probably always will be an asset in the diagnosing of diseases other than syphilis. Even though there was no doubt in regard to the superiority of the flocculation tests as shown at the 1928 Conference, the complement fixation method as applied to the diagnosis of syphilis has and probably will continue to have value for a number of years. However, the problem that confronts us is not entirely which is the better test, but which test, or tests, is best adapted for future research and improvement. Improvements certainly have been made in recent years, and no doubt by comparisons, discussions, and other means, advancement will continue to be made. However, I believe that any great improvement will come only after some of the mystery surrounding the so-called reagin in syphilitic serum has been solved. This problem is purely chemical in nature, and probably no great advancement will be forthcoming until outstanding physical chemists are drafted into the field of serology. However, let us hope that those who are prejudiced in favor of the Wassermann test and those who are prejudiced in favor of and now sponsoring the precipitation methods may hold an open mind in regard to any future method which may increase the efficiency of serodiagnosis of syphilis.—M. B. Kurtz.

PREVALENCE OF DISEASE

	November Report			
	Cases Reported			
	October 1929	November 1929	November 1928	Av. 5 yrs.
Pneumonia	325	400	476	386
Tuberculosis	766	328	527	417
Typhoid Fever	53	31	39	65
Diphtheria	476	479	396	528
Whooping Cough	349	456	1,182	590
Scarlet Fever	723	989	977	929
Measles	444	649	133	360
Smallpox	170	272	70	68
Meningitis	85	57	27	12
Poliomyelitis	52	10	8	32
Syphilis	1,416	1,339	1,171	1,122
Gonorrhea	950	806	575	765
Chancroid	35	28	8	9

CONDENSED MONTHLY REPORT

November, 1929				
Michigan Department of Health Laboratories				
	+	—	+—	Total
Lansing Laboratory—				
Throat Swabs for Diphtheria				1245
Diagnosis	38	561		
Release	108	209		
Carrier	20	309		
Virulence Tests	19	3		22
Throat Swabs for Hemolytic				
Streptococci				629
Diagnosis	170	130		
Carrier	32	297		
Throat Swabs for Vincent's	97	503		600
Syphilis				8042
Kahn	1221	6719	89	
Wassermann	2	10	1	
Examination for Gonococci ..	202	1669		1871

B. Tuberculosis	541
Sputum	72
Animal Inoculations	468
.....	1
Typhoid	270
Feces	154
Blood Cultures	52
Widals	6
Urine	53
.....	1
B. Abortus	4
Dysentery	56
Intestinal Parasites	41
Transudates and Exudates	30
Blood Examinations (not classified)	318
Urine Examinations (not classified)	145
Water and Sewage Examinations	153
Milk Examinations	749
Toxicological Examinations	61
Autogenous Vaccines	3
Supplementary Examinations	344
Miscellaneous Examinations	506
Unsatisfactory Specimens	101
Total for the Month	15727
Cumulative Total (fiscal yr.)	85497
Decrease over this month last year	228
Houghton Laboratory—	
Examinations made — Total for the month	1887
Cumulative Total (fiscal yr.)	10092
Increase over this month last year	177
Grand Rapids Laboratory—	
Examinations made — Total for the month	7001
Cumulative Total (fiscal yr.)	31437
Decrease over this month last year	526
Typhoid Vaccine Distributed, c. c.	1330
Diphtheria Antitoxin Distributed, units	43171000
Silver Nitrate Ampules Distributed	8932
Scarlet Fever Antitoxin Distributed, Pkg.	182
Scarlet Fever Toxin Dick Test distributed, c. c.	940
Scarlet Fever Toxin Immunization Distributed	4240
Smallpox Vaccine Distributed, points	16165
Bacteriophage Distributed, c.c.	3578

TRUTH ABOUT MEDICINE

NEW AND NONOFFICIAL REMEDIES

Digitos Ampules, 5 c.c.—Each ampule contains digitos (New and Nonofficial Remedies, 1929, p. 138) 5 c.c. H. K. Mulford Co., Philadelphia.

Luminal Capsules, 1½ grains—Each capsule contains luminal (New and Nonofficial Remedies, 1929, p. 81) 1½ grains. Winthrop Chemical Co., Inc., New York.

Metaphen 2,500—It contains 1 part metaphen (New and Nonofficial Remedies, 1929, p. 272) dissolved in 2,500 parts of water containing 0.33 per cent each of sodium bicarbonate and sodium carbonate. Abbott Laboratories, North Chicago.

Diphtheria Toxoid—Squibb—This diphtheria toxoid (New and Nonofficial Remedies, 1929, p.

368) is also marketed in packages of one 30 c.c. vial. E. R. Squibb & Sons, New York. (Jour. A. M. A., November 9, 1929, p. 1471).

Solution of Invert Sugar—Lilly—A solution of a mixture of dextrose and levulose, obtained by the inversion of sucrose. Solution of invert sugar—Lilly is used in the injection treatment of varicose veins. It is claimed that the use of sugar solutions such as solutions of dextrose or of invert sugar have the advantage over solutions of sodium chloride, sodium salicylate or mercuric chloride in that they do not cause severe cramps or sloughing if accidentally injected outside the veins. Solution of invert sugar—Lilly is marketed in ampules containing 5 Gm., 6 Gm., and 7.5 Gm., respectively, in 10 c.c. Eli Lilly & Co., Indianapolis.

UNDULANT FEVER

A specific treatment of undulant fever is not yet available. The use of serums has proved disappointing. Vaccines have given more encouraging results according to recent reports from the continent. In particular, an antigen prepared from dried *Brucella abortus* has seemed efficacious in a small number of cases. In this country the use of acriflavine hydrochloride has been suggested to shorten the duration of the disease. (Jour. A. M. A., November 9, 1929, p. 1475).

POTENCY OF ARSPHENAMINE

There is no official standard for therapeutic potency of arsphenamine preparations. According to reports of the United States Public Health Service Hygienic Laboratory, no one brand has been definitely established as superior to others when considered from the point of view of clinical efficiency. In some foreign countries, every preparation of arsphenamine and nearsphenamine is tested on mice for therapeutic efficiency before being used. (Jour. A. M. A., November 9, 1929, p. 1495).

NEW ETHER TREATMENT FOR WHOOPING COUGH

Results obtained with a new method of administering ether in cases of whooping cough were described by Dr. W. Ambrose McGee of Richmond at a meeting of the Southern Medical Association. Ether has an antispasmodic action which physicians are trying to use to lessen the intensity of the paroxysms of whooping cough and also to shorten the duration of the disease.

While some scientists have tried hypodermic injections of the ether into the muscles, Dr. McGee found it more effective in relieving the symptoms of the disease than other methods of treatment now commonly used. By rather literally taking the whoop out of whooping cough, the small patient is kept from becoming so exhausted and therefore he can recover from the disease more quickly.

The ether injections gave more consistently satisfactory results than the various whooping cough vaccines, Dr. McGee reported. He also stated that this treatment is more successful the earlier in the disease it is started. For this reason he stressed the importance of early diagnosis of whooping cough and declared that a simple blood test combined with other examinations make it comparatively easy to arrive at the desired early diagnosis.—Science Service.

THE JOURNAL

OF THE

Michigan State Medical Society

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Contributors are responsible for all statements, conclusions and methods in presenting their subjects. Their views may or may not be in agreement with those of the editor. The aim, however, is to allow authors as great latitude as the general policy of The Journal and the demands on its space may permit. The right to reduce in length or to reject any article is reserved. Articles are accepted for publication on condition that they are contributed solely to this Journal.

All communications regarding advertising and subscriptions should be addressed to F. C. Warnshuis, M. D., Suite 1508 Grand Rapids National Bank Bldg., Grand Rapids, Michigan.

JANUARY, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

POST-GRADUATE CLINICS

The last post-graduate clinic, namely the Couzens Children Clinic, was held at the University Hospital, Ann Arbor, on November 26th. The amphitheatre of the hospital was filled to capacity to listen to the very instructive two hour address by Professor Julius H. Hess of the Department of Pediatrics, University of Illinois, Chicago. The lecture was a very practical one and with the lantern slide illustrations, the visiting doctors found it a very easy matter to take notes of statistical matter presented. Dr. Hess has very kindly summarized his two hour address so that we are able to publish the summary in this number of the Journal.

The demonstration of diet teaching to children by Miss Frances Floore, dietitian in the Department of Pediatrics and Infectious Diseases, was an interesting feature of the day's program. Miss Floore had a class of eight diabetic children, all under

ten years of age. Questions were put to these children, the answers to which involved a knowledge of the clinical and dietetic phases of diabetes. These questions were answered very much to the delectation of everyone present. At the conclusion the children administered to one another the proper dosage of insulin. Miss Floore has in preparation a primer for the instruction of diabetic children in the intelligent management of their condition.

The afternoon session was opened by a presentation of the physician's responsibility in public health work, by Dr. Guy L. Kiefer, State Commissioner of Health. Dr. Kiefer discussed in a very intimate and appealing manner the importance of this work to the nation and the duty of each physician to the public, as well as the great privilege he has of rendering a worthwhile service to humanity.

Dr. D. M. Cowie outlined a simple, quick, routine plan for the taking and recording of the essential things in the history and physical examination of a sick baby and child. He pointed out the difference between infant, child and adult physical signs. He demonstrated a series of outline charts such as the busy doctor could carry in his pocket to record daily changes in the progress of a disease, and thus be kept in definite contact with the actual daily happenings. He pointed out how impossible it is for a very busy practitioner to remember all these details which are so essential in the proper care of a sick patient.

Dr. Cowie and several members of his staff demonstrated and explained the making of sensitization tests, and the interpretation of reactions induced by the scratch and intra-dermal methods; the technic of the Shick test, and the differentiation of a pseudo reaction. He called particular attention to the Dick test, emphasizing the care with which the test should be made, pointing out how failure to empty the needle of water after sterilization and how the use of tap water or alcohol for sterilizing purposes might alter the reaction, and how injecting the solution into the deep layers of the skin or beneath the skin will lead to false interpretations as to the individual's susceptibility to scarlet fever. The point was emphasized that the reaction must be read between 18 and 24 hours after injection. The carrying out of the Pirquet and Mantoux tuberculin test methods was described and demonstrated. Attention was called to the character of their reactions after the elapse of varying

lengths of time since injection, and to the clinical significance of the test, pointing out what type of test was of value in diagnosis, and the relative unimportance of the test in older children and adults. An appeal was made for special effort to determine tuberculin sensitivity in babies and young children. It was pointed out that tuberculosis in babies is very much more common than has been supposed, and it was intimated that tuberculosis recognized early in an infant could be cured and that in such cases immunity probably life long.

Dr. Cooperstock presented a workable classification of the nephritides of infancy and childhood. He especially pointed out that the sub-acute or chronic glomerular nephritis characterized by blood, albumin, casts, edema and other manifestations of true nephritis often progresses into the stage of nephrosis, during which time many of the cardinal manifestations of nephritis are absent, but the patient continues to show edema and the urine shows large amounts of albumin. This form seems to be more common in children than in adults. Its treatment seems to be the reverse of that usually used for nephritis; namely, a comparatively high protein intake is the best diet during this stage of the disease.

The next clinic, made possible likewise by the munificence of the Couzens Fund, will take place at the Hurley Hospital, Flint, Mich., on January 15th. A detail program of this Clinic appears in this number of the Journal.

The Couzens Fund as is generally known has been set aside for the benefit of children in the broadest sense. The children who are most in need are those who enter life under a health handicap. The eagerness with which physicians availed themselves of the first Couzens Fund Clinic is evidence that in the establishment of this kind of post-graduate instruction the spirit of the foundation is being fulfilled to the best advantage.

STATE MEDICINE

Before entering upon any enterprise or important venture the wise man always sits down and counts the cost. Have we sufficient data at hand to form any adequate estimate of what the adoption of state medicine would mean to the state? One of the largest hospitals in Detroit is kept up by the municipality for the avowed purpose of taking care of the indigent sick. The estimates for current expenses for the fiscal year ending June, 1930, for this in-

stitution, including two other smaller institutions which are also supported out of municipal taxation, is \$2,202,828.00. This sum includes only what may be included as the annual expenditure or upkeep. It does not include any part of the cost of the original buildings nor of extensive alterations that may be found necessary. The sum in itself appears to be quite large and yet it does not include the salaries for doctors (apart from superintendent and assistant superintendent and two or three part-time physicians) which would be necessary under a system of state medicine where all doctors would be placed upon the payroll of the state or municipality as the case may be. While this hospital is large and well equipped, it is only one of a half dozen large hospitals caring for the sick. If an attempt were made to organize hospitals under a system of state medicine, the cost in public taxation would be simply enormous, as it would include also huge salary appropriations for attending physicians and surgeons.

There is a special kind of hospital which has been long in existence performing a service, namely, the care of mental cases, which has been long recognized as the legitimate function of the state. An appropriation of something like \$24,000,000 has been recently sought for the further extension of such hospital facilities. What is commonly known as "state medicine" does not apply to institutions for the care of feeble-minded and other mental cases.

Now, on the other hand, while state medicine would mean a greatly increased burden in taxation, it would mean also for the individual doctor that he would be required to work on a salary, that the salary would be regulated according to the law of supply and demand, that also at a certain age he would be liable to dismissal in favor of younger or more recent graduates, that on the whole his independence and individuality would vanish. The old-time contact of physician and patient, which has meant so much to the public in case of illness, would be no more. The doctor as a confidant, friend and advisor, would be sacrificed for institutional service. This latter circumstance would be, we believe, greatly deplored by the great mass of intelligent, self-respecting people, who are already beginning to feel that the family doctor is passing.

DR. VICTOR C. VAUGHAN

To those physicians who have been in practice in this state for over a decade, Dr.

Vaughan's name is more in the nature of a household word. A large number of them have sat in his classes and have had the advantage of that personal contact of teacher and student. To others he has been a more or less familiar figure, not only at the annual meetings of the Michigan State Medical Society, but at many other medical meetings as well. Dr. Vaughan's long career has been one of great activity. He combined the mind of the research student with that of the politician (using the word "politician" in its better sense, of the extrovert mind which is capable of impressing itself upon large groups.) The list of positions which Dr. Vaughan held that were in the gift of his fellow professional men is a formidable one. Apart from his position as Dean of the Medical School of the University of Michigan, he was a former president of the American Medical Association, of the Association of American Physicians, a member of the National Academy of Sciences, three times chairman of the Division of Medical Sciences of the National Research Council, and a member of the Typhoid Commission during the Spanish-American War. During the World War he held the rank of Colonel in the Medical Corps of the United States army, where he was in charge of communicable disease in the camps of the United States. Among his later achievements was the founding of the monthly journal, "Hygeia" published by the American Medical Association. Dr. Vaughan was therefore also a pioneer in public health education.

We shall not attempt to estimate Dr. Vaughan's influence upon American medicine. That has been accomplished in the interesting paper by Dr. C. B. Burr, who has proved a never-failing friend to this Journal when any request is made of him.

One contribution, besides the volume of medical literature from his pen, was his interest in the medical library of the University. Dr. Vaughan conceived very early in his career the importance of a first class library. He builded both wisely and well and as a result the Medical Department of the University library is one of the best on the continent, second only, we have been told, to the Surgeon General's library at Washington.

Since his retirement, Dr. Vaughan has written an autobiography entitled, "A Doctor's Memories." This work, written in a charming style, gives a very interesting pen picture of the author.

A BORROWED THOUGHT*

"If a man builds a house and leaves it exposed to the sun, the wind, the rain, the frost, it will, from the very moment when he ceases to put work into it, begin to decline; unless he continue to be a builder, to use paint and timber and cement as occasion arises; the elements will undo his work and all will return through destruction to nothingness.

"It may take only a few years, it may take centuries: but infallibly the creation of man's hands will deteriorate and dissolve unless man's hands continue to be creative. His works may last as long as the Pyramids or be destroyed in a season like a breakwater in a storm, but peace is never declared between them and the elements, and unless man fight he must be defeated.

"This is as true of a man's character and of a man's profession as it is of his monuments and his houses. Unless he goes on creating and constructing new forms of service in his profession they will infallibly succumb to the inertia which lies like the sea round every effort of man's spirit.

"Most of us have seen with regret the young man who, perhaps, after leaving public school or university, slowly declines from progress to stagnation, from stagnation to deterioration, because he has allowed to die within him the determination to build a finer personality. He thinks his education was complete when he took his degree, and he ceases to strive. He becomes less ambitious, less interested, and finally even less intelligent."

* This is an extract from an article which appeared in the London Times. It contains such a striking sentiment, so well expressed that it is given editorial prominence.—Editor.

THE THYMUS

In this number of the Journal appears a symposium on the thymus gland, presented at the last general meeting of the Michigan State Medical Society. These papers should be read by everyone, inasmuch as the mystery of the thymus (for want of a better expression) concerns almost every department of medicine or surgery. The symposium is particularly inclusive and well balanced. Dr. Clement A. Smith gives an excellent review of the literature, particularly historic, on the subject, concluding that the function of the thymus gland has not yet been made entirely clear and that there is need for much further experimentation before it will be. Dr. W. C. C. Cole discusses the clinical as-

pects of diseases of the thymus in childhood. He concludes that there is very little evidence that the thymus plays any large part in diseases of childhood.

Dr. Cooperstock discusses the subject of enlarged thymus and status thymico-lymphaticus, reviewing 335 case records within the past 10 years. In 248 cases the diagnosis was made by the X-rays in the absence of clinical symptoms. Sixty-one presented such symptoms as cyanosis, dyspnea, holding the breath, stridor and convulsions. Dr. Cooperstock agrees with the other essayists that there is still much to be learned about thymic conditions. It seems that simple pressure by the thymus is not the whole factor in the production of the thymic syndrome, though simple enlargement evidently plays a large role. He notes a coincidence of thymic enlargement, status thymico-lymphaticus and adrenal pathology and predicts that this may prove an important factor in elucidating the clinical problem connected with enlarged thymus and status thymico-lymphaticus.

In the X-ray diagnosis of enlarged thymus the importance of lateral films has been stressed. Dr. Hasley describes studies of the thymus by means of serial or so-called "moving pictures," that is, several exposures made per second, which gives an opportunity for a functional observation of the heart and aorta. Two or three exposures per second are made so that respiratory movements do not materially blur the radiogram. (The apparatus and method have been devised by Dr. Hans A. Jarre of Detroit). This rapid serial method of examining the chest is undoubtedly the most accurate and should supercede the usual roentgenographic methods. The objection to its general use, however, is the cost, not only of highly complicated apparatus, but films as well.

All are agreed, however, on the method of treatment where indicated so as to eliminate the pressure symptoms. The X-rays have been found to be practically a specific.

TRAFFIC FATALITIES

This is a sort of perennial subject for editorial comment in both the daily and medical press. The Detroit Automobile Club has compiled statistics of accidents in fourteen counties of Michigan covering the first ten months of 1929. In only three of the counties studied has there been a decrease in the total number of fatal accidents occurring in 1929 over 1928. These counties are Kent, Kalamazoo and Cal-

houn. In all three counties the decrease in mortality has amounted to 14. Wayne county naturally heads the list in the number of fatal accidents, namely 441 in 1929, with 369 in 1928. The total number of accidents in 1929 in all 14 counties was 1,245; in 1928 1,060. These statistics apply to only those counties having more than 14 fatalities and are not taken to represent the total loss of life by accidents throughout the state.

There is no question but that a great many of these accidents could have been prevented and human life spared to usefulness. The drunken driver is a menace that should be eliminated from the streets completely. Also the moron and mentally defective should be refrained from using dangerous machines on the public highways. The report of the Detroit Automobile Club quotes approvingly an article from the Saturday Evening Post as follows:

"Too many judges are too lenient in their handling of persons convicted of drunken driving. Drags and pulls are too effective. The jail house for a lengthy period is the only punishment that will cure and prevent."

"Highway accidents occur in greatest number not on bad curves, or dangerous declines or inclines, or slippery pavements, at night, but on straight, level, dry sections during daylight hours. It is an illuminating commentary on the qualifications of the car driving portion of our population.

"Only twenty states consider the licensing of operators important. And in not one of these twenty is the test rigid. But whether their eyesight was normal, whether they were subject to epilepsy, or whether in other ways they were physically incapacitated, *there is no way of knowing.*

"It is not a question of employing more patrolmen or traffic officers or guards. It is simply a question of awakening operators to the danger of inattention, carelessness and discourtesy."

It is high time that greater care were exercised not only in the granting of licenses, but in the checking up of those who may have held licenses for a number of years. Here, at least, is a good place to begin.

No scientific discovery is accepted until it has been checked again and again by investigators working with the most rigorous and vigorous scepticism. At the court of science every prisoner is suspected until proved innocent by a cloud of witnesses before an implacable bench of unemotional judges.—ADAMS GOWAN WHITE.

Our earth is degenerate in these latter days; there are signs that the world is speedily coming to an end; bribery and corruption are common; children no longer obey their parents; every man wants to write a book and the end of the world is evidently approaching.

—(From an Assyrian Tablet 2800 B. C.)

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

The Committee on Civic and Industrial Relations held a meeting in Detroit on December 9.

Dr. G. F. Inch has been appointed Medical director of the new state insane hospital to be built in Washtenaw County.

Dr. Guy L. Kiefer Health Commissioner of the State of Michigan addressed a meeting of the Hygienic Council of Ontario at Toronto Dec. 2

The offices of the Board of Registration in Medicine were removed on December first to 1010 Maccabee Building, Detroit.

The Annual Conference of our County Secretaries will be held at the A. M. A. headquarters in Chicago on January 22 and 23. See program in this issue.

In our next issue you will find a subscription blank for our Society's History, edited by Dr. C. B. Burr. It is hoped that it will be ready for distribution by April, possibly in March.

Mr. William J. Burns who has been for a number of years Executive Secretary of the Toledo Academy of Medicine has been appointed Executive Secretary of the Wayne County Medical Society to fill the position left vacant by the resignation of Dr. Earl Miller, who has resigned on account of ill health.

The Postal Life and Casualty Company of Kansas City, Missouri, is alleged to be circularizing the profession and others in this state.

They have not obtained permission to date to do business in Michigan and any policies issued by them "to residents of this State are illegal and not enforceable in the courts of Michigan" according to the Department of Insurance at Lansing.

Memorial Hospital at Owosso has been enlarged and improved during the past summer and fall, and has now a power plant and laundry equipped with the latest machinery to be had. The battery of boilers is fired by automatic oil burners, and the laundry has the newest of washers and mangles. A large ventilating and smoke stack was added to the plant and the dining rooms and kitchens in the basement have been enlarged and brought up to date. A complete refrigeration system in the basement and call system in the office were also installed. Altogether the improvements cost around \$100,000.

DR. GEIB SUCCEEDS DR. FREUND

Dr. Hugo Freund of Detroit has resigned as member of the Detroit Board of Health. He has been succeeded by Dr. L. O. Geib. Dr. Freund had been a member of the Board of Health for thirteen years. Dr. Geib has shown an interest in public health work for a number of years having held the position of Diagnostician of Contagious

Diseases for twelve years. He comes to the position well qualified and with the preventive medicine viewpoint which should be the possession of those engaged in public health administration.

DR. F. G. NOVY, PORTRAIT

The graduates of the school of medicine of the University of Michigan December 9 presented to the university a portrait of Dr. Frederick G. Novy, professor of bacteriology and director of the hygienic laboratory. On December 9 Dr. Novy was sixty-five years of age. Forty-three of those years he has spent as a member of the faculty of the school of medicine. The ceremony on the afternoon of December 9 was conducted in the Lydia Mendelsohn Theater of the Michigan League. Dr. Alexander G. Ruthven, president of the university, accepted the gift for the University. The portrait was painted by John Weiss of Cincinnati.

LOCAL A. M. A. COMMITTEE

The local committee on arrangements for the annual meeting of the American Medical Association which will be held in Detroit in June is made up of the following Detroit physicians: Dr. Rollin H. Stevens, chairman local arrangements; Dr. Louis J. Hirschman, and Dr. A. S. Brunk, vice-chairmen of committee on arrangements; Dr. H. W. Plaggemeyer, Treasurer; Dr. L. T. Henderson, secretary; Dr. A. W. Blain, entertainment; Dr. Basil L. Connelly, registration; Dr. James E. Davis, scientific exhibits; Dr. Fred M. Meader, technical exhibits; Dr. William C. Lawrence, hotels; Dr. Frank J. Sladen, section; Dr. R. J. Palmer, finance, and Dr. Charles E. Dutchess, publicity and printing.

MICHIGAN WELL REPRESENTED

The Fifteenth Annual Meeting of the Radiological Society of North America met for the first time on Canadian soil, namely at Toronto, the first week in December. In the fifteen years of its history this society has grown to be one of the largest societies of its kind in existence. The program was well represented by Michigan men. Among those who presented papers were Drs. J. T. Case, formerly of the Battle Creek Sanitarium, W. J. Cassidy of Detroit, H. P. Doub of Detroit, P. M. Hickey of Ann Arbor, H. A. Jarre of Detroit, C. S. Oakman, formerly of Detroit, E. A. Pohle formerly of Ann Arbor, A. E. Schiller of Detroit, R. S. Stone formerly of Detroit, and W. O. Upson of Battle Creek. Michigan was well represented by other members of the profession who were not on the program. Dr. Alden Williams of Grand Rapids had charge of the scientific exhibit.

HONORING PROF. IVAN P. PAVLOV

The Bulletin of the Battle Creek Sanitarium and Hospital Clinic for October which has just come to hand, contains 219 pages. It is a special number gotten out in honor of Professor Pavlov the noted Russian Physiologist. The contents of

the volume consist of papers by Pavlov's pupils, friends and admirers. It opens with a word of greeting by Dr. Vernon L. Kellogg, noted biologist, then follows an interesting article by John Harvey Kellogg, M. D., of the Battle Creek Sanitarium describing a visit to Pavlov's laboratory. Following this is an interesting paper entitled "I. P. Pavlov as a Scientist" by W. N. Boldyreff, M. D. Dr. Boldyreff is at present Director of the Pavlov Physiological Institute of the Battle Creek Sanitarium. There are in all twenty-nine contributors including some of the most noted names in science of medicine. The volume is well illustrated with half-tones of the noted physiologist together with pictures of himself with groups of his co-workers. The Battle Creek Sanitarium is to be congratulated on the production of this volume.

THE TRUE STORY OF ACTEROL

(For additional details see the Mead Johnson announcement in this issue and also watch for special color supplement, Journal American Medical Association, January 18. All Mead Products are Council-Accepted.)

Chemists call it by its correct chemical name, *solution activated ergosterol*—the name by which Mead Johnson & Company first supplied it.¹ The largest manufacturer of rare sterols in America, early having activated cholesterol² (1925), being first to commercially produce pure ergosterol³ and to standardize activated ergosterol⁴ (October, 1927), seeking to protect themselves and the medical profession against substitution, Mead Johnson & Company coined the name "Acterol"—signifying "activated ergosterol." The Council on Pharmacy subsequently coined a name, "Viosterol." As servants of the American Medical Profession, this Company cheerfully defers to its wishes and now call its product Mead's Viosterol in Oil, 100 D. The product remains the same: only the name is changed.

1. Biol. Chem., 76:2.

3. Ibid., 80:15.

2. Ibid., 66:451.

4. Ibid., 75:251.

A CENTURY OF ANATOMY

Professors of anatomy in seven of the leading medical departments of American universities are collaborating in a study of methods whereby anatomical research during the past hundred years may be graphically represented at the Chicago Century of Progress celebration in 1933. The universities represented are those of Chicago, Minnesota, Illinois, Michigan, Northwestern, Cornell and Johns Hopkins. The anatomy exhibits committee has just been appointed by its chairman, Dr. R. R. Bensley, professor of anatomy at the University of Chicago. Dr. Bensley is a member of the National Research Council's Science Advisory Committee which is charged with the task of formulating a science theme for the Chicago exposition. Forty or more other groups of scientists, representing all the sciences in both the pure and applied fields, are working simultaneously with Dr. Bensley and his associates in collaboration with the Century of Progress trustees. The science theme will take the form of a moving panorama showing the march of science during the past hundred years. Dr. Bensley's appointees are Dr. Leslie B. Arcey, Northwestern University; Dr. Clarence M. Jackson, University of Minnesota; Dr. Carl G. Huber, University of Michigan, Dr. Otto F. Kampmeier, University of Illinois; Dr. Charles R. Stockard, Cornell Univer-

sity, and Dr. Lewis H. Weed, Johns Hopkins University.

REPORT OF EXAMINATION HELD AT LANSING

October 8, 9, 10, 1929

Univ. of W. Ont.	1914	79.4½ %
Queen's Univ.	1928	85.8½ %
Temple Univ.	1925	85.8 %
Univ. of Montreal	1925	79.6½ %
Northwestern Univ.	1929	84.4½ %
Northwestern Univ.	1929	83.4 %
Rush Med. College	1929	87.1 %
Univ. of Toronto	1926	87.6 %
Queen's Univ.	1927	83.6½ %
Northwestern Univ.	1930	85.8½ %
Loyola Univ.	1929	86.5½ %
Univ. of Michigan	1929	84.5½ %
Univ. of Toronto	1913	78.6 %
Marquette Univ.	1929	85.8½ %
Woman's Med. College	1926	81.8 %
Yale University	1928	88.3 %
Univ. of Berlin	1929	78.6½ %
St. Louis Univ.	1928	86.1½ %
Coll. of Med. Evang.	1928	86.2½ %
Northwestern Univ.	1929	80.6½ %
Rush Med. College	1927	85.7½ %
Rush Med. College	1930	82.8½ %
Queen's University	1922	83.8½ %
Georgetown Univ.	1929	85.5 %
Georgetown Univ.	1929	86.6½ %

REPORT OF EXAMINATION HELD AT LANSING

October 8, 9, 1929

Palmer C. School	1923	72 %
Palmer C. School	1925	68 %
Palmer C. School	1923	75 %
Lincoln C. College	1929	78 %

THE DETROIT SESSION, A. M. A. THE SCIENTIFIC EXHIBIT

The Scientific Exhibit for the Detroit Session of the American Medical Association, June 23-27, 1930, will be located in the Detroit Masonic Temple. In this excellently equipped building there will be housed also the Registration Bureau, Technical Exhibits and the Sections of the Scientific Assembly.

The Committee on Scientific Exhibit emphasizes again the necessity of presenting exhibits in a manner which will stress their scientific value. This may be done by carefully worded explanatory placards or legends, and particularly by personal demonstration by the investigator himself. The Committee feels that the Scientific Exhibit offers unusual opportunity for investigators and visiting physicians to meet and discuss informally the phases of the research being presented. Also it should be remembered that general attractiveness is essential. The Committee will do its part by providing attractive booths decorated appropriately; uniform illuminated signs giving the name of the exhibitor and the title of the exhibit will be furnished, as well as a uniform shelf with covering. Judging from the interest already manifested, the next Scientific Exhibit will probably be the most outstanding in the history of the Association.

Application blanks for the Scientific Exhibit may be obtained by sending requests for them to the Director, Scientific Exhibit, American Med-

ical Association, 535 North Dearborn Street, Chicago.

Applications must be received before March 20th, 1930. In order that the amount of space available may be apportioned to the best advantage to all concerned, the Committee will make no assignments previous to April 10th, 1930; nor can large blocks of space be assigned to individual exhibitors.

BEAUMONT LECTURES

Professor T. Wingate Todd who is the Beaumont lecturer for 1930 was born in Sheffield, England, in 1885. He says, however, that his place of birth was an accident as neither his ancestry up-bringing or accent have any relation to his English birth. He says he actually came from Dunoon, Argyshire, Scotland. He graduated Bachelor of Medicine and Bachelor of Surgery in 1907 and took his F. R. C. S. England in 1911. He came to Cleveland as full time professor of anatomy in 1912. In addition to the chair of anatomy he holds the Directorship of the Hamann Museum of Comparative Anthropology and Anatomy and the Chairmanship of the Brush Foundation for Population Betterment. He has been particularly occupied with clinical anatomy and has written a book on the subject in 1915 and returned to radiography in 1925 to continue his studies on the alimentary tract which were interrupted in 1912. He has been also identified with the so-called anthropological side of anatomy, dealing with Egyptian material, medieval populations in England and the pre-historic peoples of our own Southwest and has been responsible for the mortality statistics thereon.

This series of lectures will be found in reality to supplement rather than replace the post-graduate work in medicine which is being so well accomplished by the Department of Post-Graduate Medicine of the University of Michigan and the Michigan State Medical Society. There is no charge and an invitation is extended to all our members who may find it convenient to attend.

The Beaumont Lectureship Foundation of the Wayne County Medical Society announce the subjects of the Beaumont lectures which are to be given by Dr. T. Wingate Todd the latter part of this month. The general subject of the Foundation for 1930 is Clinical Behavior Patterns of the Alimentary Tract. The subjects of the three lectures are as follows:

1. Evening of January 27, 1930—Normal Gastric Movements and Their Modification from Psychic Stimuli.
2. Morning of January 28, 1930. Therapeutic Control of Gastric Muscular Action.
3. Evening of January 28, 1930—The Normal Movements of the Proximal Colon and Their Modification in Daily Life.

COMMUNICATIONS

Dear Doctor Warnshuis:

At the regular meeting of the Board of Trustees of the American Medical Association held in Chicago in November, your letter of October 26, in which a very gracious invitation was ex-

tended by the Michigan State Medical Society to the officers and members of the House of Delegates of the Association to be the guests of that society on the evening of June 23, 1930, was considered by the Board and the invitation unanimously and enthusiastically accepted.

Very sincerely yours,

Olin West.

ACETONEDICARBOXYLIC ACID! IT'S A NEW BAKING POWDER

A baking powder which does not leave a residue in the finished bread or cake has just been worked out in the chemistry laboratories at the University of Wisconsin, by Edwin O. Wiig. This new leavening agent has as its active agent acetonedicarboxylic acid, which during the baking process disappears entirely as gases. The formation of carbon dioxide, the gas which "raises" the cake, is only part of the story of baking powder. The other part concerns the product which remains in the cake as a residue. The various commercial baking powders on the market at present leave as residues saline cathartics, such as sodium tartrate, Rochelle salt, disodium phosphate, sodium sulfate or aluminum hydroxide. There is still a question as to the possible ill effect of some of these materials upon health. Hence the advantage of a baking powder which leaves no residue whatsoever. Acetone is the only other substance formed besides carbon dioxide, and the acetone completely evaporates at baking temperatures.

The new powder depends for its action on combination with the water of the dough, just as do the present powders. Hence in order to protect it from atmospheric moisture it is mixed with starch. This cornstarch has a second function, more important than that just mentioned. Starch makes it possible for the chemist to standardize his product. All baking powders must have approximately the same "raising" strength to make possible the use of any recipe. The housewife-consumer will not consult the label of her tin of baking powder, and then compute whether the "two tsps. b.p." of her recipe should be doubled or halved. Starch takes care of any variation in the amount of carbon dioxide given off by active agents of differing compositions.

The keeping properties of acetonedicarboxylic acid baking powder are excellent, as Mr. Wiig has shown by various tests. It needs only to be kept in the customary moisture-proof tin. The keeping power of a product is of utmost importance to the manufacturer.

Further study of the suitability of acetonedicarboxylic acid as a leavening agent is being continued at the University of Wisconsin. The question of a cheaper source of raw material is still under investigation. At present citric acid is the raw material used in the making of acetonedicarboxylic acid. Cull lemons form the natural source of citric acid, and is the principal one in use. A shorter name for the substance would also be highly desirable, but that is a simple problem.—Science Service.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

Frederick C. Warnshuis, M. D.
Secretary Michigan State Medical Society

The Couzens' Children Fund of Michigan

Presents

Its Second Pediatric Clinic on the Diseases of
Infancy and Childhood

Directed by

The Post-Graduate Department of the University of Michigan
and

The Michigan State Medical Society

FLINT, MICHIGAN, WEDNESDAY, JANUARY 15, 1930

HURLEY HOSPITAL AUDITORIUM



- 10:00 a. m. (a) Cyanosis of the Newborn.
(b) Hemorrhage of the Newborn.
(c) Feeding of the Newborn.
(d) Round table discussion of Infant Feeding Problems.
Dr. David J. Levy, Detroit
- 12:00 m. Luncheon.
- 1:30 p. m. Prophylactic Methods in Communicable Diseases.
Dr. Guy L. Kiefer, Lansing
- 2:00 p. m. Diagnosis and Treatment of Osteomyelitis.
Dr. Grover C. Penberthy, Detroit
- 2:30 p. m. Tannic Acid Treatment of Burns of Children, with slides
and demonstration of technic.
Dr. Edward C. Davidson, Detroit
- 3:15 p. m. Treatment of Empyema.
Dr. Grover C. Penberthy, Detroit

ANNUAL COUNTY SECRETARIES' CONFERENCE

To be held in Chicago, January 22-23, 1930, at the Drake Hotel and Headquarters of the American Medical Association, 535 North Dearborn Street, Chicago.

PROGRAM

January 22, 1930

- 6:00 P. M.—Dinner. Drake Hotel.
- 7:45 P. M.—Purpose of the Conference.
R. C. Stone, Chairman of the Council.
- 8:00 P. M.—Your State Society.
President J. D. Brook.
- 8:15 P. M.—Our Post Graduate Objectives.
J. D. Bruce.
- 8:30 P. M.—Objectives for County Societies.
Olin West, Secretary of American Medical Association.
- 9:00 P. M.—Legislative Obligations.
John Sundwall.
- 9:15 P. M.—Round Table—F. C. Warnshuis.
Opening Discussion
L. Fernald Foster, Bay City.

PROGRAM

January 23, 1930

- Headquarters—American Medical Association
535 North Dearborn Street
- 9:30 A. M.—Bureau of Investigation.
Arthur J. Cramp.
- 10:00 A. M.—Bureau of Legislation and Legal Medicine. W. C. Woodward.
- 10:30 A. M.—Council on Pharmacy and Chemistry.
Leach.
- 11:00 A. M.—Packet Library and Publications.
Morris Fishbein.
- 11:30 A. M.—Public Health Education.
J. M. Dodson.
- 12:00 M. —Your American Medical Association.
Olin West.
- 12:30 P. M.—Luncheon.—In the building.
- 1:15 P. M.—Tour of the Building.

NEW YEAR

"Twenty-nine is gone. As we enter "Thirty" we extend to our members a most cordial wish that this new year will be filled with a generous measure of happiness, well being and prosperity. There is much before us to be done. There are certain problems for us to solve, while other problems must await solution by time and the development of readjusting methods. Milling around, chaffing at the bit, or frantic rantings rarely achieve solutions. Far too often the event of the hour becomes but a trivial incident when the day is closed. What we require is discernment to enable us to differentiate the vital from the trivial. To deal with fundamentals and to ignore unessentials.

As a Society we have a few main objectives. If we remain steadfast in their

pursuit, the side issues either solve themselves, or are buried beside our path of progress. In the main, our outstanding objectives are, the integrity and influence of our county units, the conducting and providing post-graduate opportunities, the health education of the public and the conservation of our organizational prestige. Accompanying these there are the general purposes of enhancing membership interests, a policy of helpfulness to all members, though not sacrificing the welfare of the whole to further the interests of a few, the cementing of friendships and the stimulation of scientific advancement.

With this governing motive, accompanied by state-wide expressions and evidence of loyalty, our new year will record individual happiness and collective prosperity.

MEMBERSHIP CERTIFICATES

Our 1930 membership certificates have been reduced in size. The change was made because of postal regulations. Members who have been accustomed to frame their certificates can use their old frames by inserting a border mat.

As soon as your county secretary mails your 1930 dues, the new certificate will be sent you in a flat envelope. On the face of the envelope you will find this line: "This contains your membership certificate." This is a precaution to enable you to identify your certificate in the mail that comes to your office.

COUNCIL'S MID-WINTER SESSION

The regular mid-winter session of the Council will be held in the board of trustees room at the headquarters of the American Medical Association in Chicago at 10 a. m., January 22nd, 1930.

The Council will join the County Secretaries at dinner at 6:30 p. m., on January 22nd at the Drake hotel. Elsewhere in this issue will be found the program of the Annual County Secretaries' Conference, to be held on January 22nd and 23rd.

PASSING COMMENTS

We wonder just how the legal profession can justify a \$100,000.00 fee to a certain legal firm for services rendered in a recent divorce case in Michigan. Especially when the services could not have extended over a longer period than six months and the court hearing was private, lasting only a few hours. Get while the getting is good

predominates quite generally in legal circles.

Centralization of control with chain banks as feeders bids well to disrupt community interests and needs. Your local bank, affiliated with the chain and subject to the commands and demands of the central office, no longer remains a local institution or asset. The time is not ripe to abolish community interests. We will do well to stick to our local institutions that are not dominated by foreign control.

Lest we forget and experience again legislative rebuffs, it is urged that County Societies appoint active legislative committees who will make early contact with the chairman of the State Committee on Legislation.

Again we have the incident of a jury rendering a verdict of \$20,000 damages against a surgeon for alleged malpractice. The testimony of an imported Illinois doctor was given greater credence than the opinions of several well recognized Michigan surgeons. The conclusions reached by some juries are at times astoundingly remarkable.

We, as a people, pride ourselves because of our alleged mental and environmental progress and attainments. Yet, have we, as a people, progressed as far as we think we have? The human mind is not far removed from the middle ages and Salem days crop up quite readily. Witness the spectacle at the eastern grave of a young priest. The alleged cures are discredited by competent authority—yet there is something in the human mind that stampedes individuals and causes them to revert to the miracle age. We would truly marvel, if it were true, at the child, blind from birth, who suddenly regained her sight and was immediately able to read. Who taught her, and by what miracle did she acquire the education to read or recognize letters and words? Emotional stress, but the public falls, led by sensational journalism.

Commencing January 1st, the Fellowship and Journal subscription of the American Medical Association will be seven dollars per year. The increase has been necessitated by advances in cost of printing and labor. At that, the A. M. A. Journal excels others that charge ten and twelve dollars per year.

The American Medical Association convenes in Detroit the week of June 22nd. The Journal will contain much advance information. Become a Fellow now, receive and read the best medical publication in the world and aid in supporting the work of your national organization. Your application, mailed today, will start 1930 right for you.

Your 1930 dues are payable. Send your check to your County Secretary, thereby relieving him of collecting details. Why wait till March?

“We perceive the shadow to have moved, but did not see it moving,” thus does our esteemed editorial friend of the Nebraska Journal caption an editorial. The editorial is a splendid one, narrating the advancement of scientific medicine in a score of years. The caption impresses us for it is an admirable text for a dissertation—a sermon in itself. Many there are who see the shadows of darkness and ignorance recede, are unmindful of it, and remain within the shadow. This is particularly true of certain individuals and groups. Let's hope they will emerge into the brilliant sunlight this coming year.

We are encouraged and inspired as we receive and read the reports of some of our County Society meetings. Turn to the pages devoted to County Society news. If your local society is dormant, you will find ways to pep it up. Some counties rarely send in reports—they are solicited and desired. This year is the year for state-wide revival—will you aid?

MEETING OF THE EXECUTIVE COMMITTEE

A meeting of the Executive Committee was held in the Book-Cadillac hotel, Detroit, at 6 p. m., December 16, 1929. Present:

Dr. R. C. Stone, Chairman of the Council; George L. Le Fevre, B. R. Corbus, Henry Cook, J. D. Brook, President; J. Hamilton Charters, Councilor; J. H. Dempster, Editor; F. C. Warnshuis, Secretary.

1. The Secretary presented a communication from two insurance representatives making a tender of insurance rates for our members who wish to take out insurance policies payable to the Endowment Foundation of the Michigan State Medical Society. The proposition was discussed

in detail. The Secretary was directed to draw up an itemized recommendation for presentation at the Annual Meeting of the Council.

2. The Secretary and the Editor presented bids for the publication of the proposed history of our State Society. On motion of Le Fevre-Corbus, the Secretary and the Editor were authorized to proceed with the publication of this history. A second motion by Corbus-Le Fevre moved that the Executive Committee approve the proffer made by the Bruce Publishing Company, and that if a satisfactory contract covering the interest of the State Society can be secured from the Bruce Publishing Company, that the Secretary be authorized to execute such contract.

3. On motion of Le Fevre-Cook the Executive Committee commended the Pediatric Clinic that was given at the University Hospital under the auspices of the Couzens Fund, together with the post-graduate department of the University and the State Medical Society, and approved holding the second clinic in Flint on January 15, 1930.

4. On motion of Le Fevre-Cook, the Executive Committee approved the recommendation of the Secretary that at the Secretaries' Conference in Chicago, the first evening be devoted to the discussion of the problems of the Michigan State Medical Society and its component units, and that the second day be devoted to the inspection and discussion of the American Medical Associations headquarters activities.

5. On motion of Cook-Le Fevre, the Secretary was instructed to invite the Chairmen and Secretaries of the Scientific Sections, of the Society to meet with the Executive Committee in February for the purpose of outlining the scientific programs for the 1930 Annual Meeting.

6. Upon motion of Le Fevre-Corbus, the Chairman of our Legislative Committee, Dr. Sundwall, is to be invited by the Secretary to be present at the January session of the Council and the Secretaries' Conference for the purpose of outlining and discussing our legislative program for the coming year.

7. Upon motion of Corbus-Le Fevre, the Speaker's committee appointments were approved.

8. Upon motion of Corbus-Le Fevre, the Secretary was authorized to proceed with the program for the entertainment of the officers and members of the House of

Delegates of the American Medical Association at the 1930 Detroit meeting.

There being no further business, the meeting adjourned at 10:45 p. m.

F. C. Warnshuis, Secretary.

REVISING THE INTERNATIONAL LIST OF THE CAUSES OF DEATH

W. J. V. DEACON

(Michigan Department of Health)

The International Commission for the decennial revision of the International List of the Causes of Death met in Paris, France, on October 16th to 20th, 1929, and revised the list. This is the fourth decennial revision. There were 35 countries represented by 64 delegates in this conference and in addition to these countries, the League of Nations and the International Red Cross were represented. These agencies had six representatives, a total of 70 official delegates. It was a great meeting.

In the United States there has been a committee of the American Public Health Association with advisory members meeting annually for the last ten years, and several years holding two or three meetings, in addition to the annual meeting, so that the American delegation was fairly well fortified and its position and objectives clearly defined.

This conference was officially called by the French government and an invitation extended to the United States through the Department of State. The delegates who were named were officially commissioned by the Department of State. Those attending from the United States were Dr. Wm. H. Guilfooy, Register of Records for New York City; Mr. George H. Van Buren of the Metropolitan Life Insurance Company; Dr. T. F. Murphy of the Bureau of Census, Washington; Dr. Emelyn Jones, State Registrar of Pennsylvania; Miss Jessamine S. Whitney, Statistician of the National Tuberculosis Association, who was the only woman member of the conference; and Dr. W. J. V. Deacon, Director of the Bureau of Records and Statistics, State Department of Health, Lansing, Michigan.

No provision was made for the payment of the expenses of the delegates from the United States. These, I believe, were the only delegates to the conference who were not sent at government expense. The writer was enabled to attend, thanks to the

courtesy of the Michigan State Medical Society and some other agencies.

In addition to this group who attended from the United States was Dr. Rupert Blue, Assistant Surgeon General, U. S. Public Health Service, who is stationed in Paris. Dr. R. Pierret, one of the leading pathologists of France and a consultant of the U. S. Public Health Service, served as advisory pathologist and occasionally as interpreter for the American delegation. The official language of the conference was French and an interpreter had been employed from the League of Nations at Geneva, who immediately translated everything that was said. If the address was made in French, he translated it to English, and if the address was made in English he translated it to French, although I think most of the delegates had at least a bowing acquaintance with both languages.

The sessions were held in one of the council rooms of the French Foreign office, a very beautiful room in one of the older government buildings. Opening off of this room was the smaller room in which the Kellogg Peace Treaty was signed. This smaller room was used by the delegates as a committee room and was very elaborately furnished with rich carpets and hangings and a very elaborate fireplace and mantle.

The conference elected Professor Roger, Dean of the Faculty of Medicine of the University of Paris as President, and Dr. Michael Huber, Director General of Statistics of France, as Secretary General.

Some of the more difficult problems were referred to committees, but in most cases discussion was from the floor and the question was settled by vote, each country having one vote. This meant that Luxemburg, as an illustration, with a population of about one-quarter million, could offset the vote of the United States representing one hundred twenty million, or China representing four hundred fifty million. Much dissatisfaction was apparent and I am inclined to think that the basis of representation will be different at the next conference.

It will be recalled that the list in present use, which was the third decennial revision, consists of 205 titles and the finished fourth revision consists of 200 titles. Many of the changes are minor changes in the matter of inclusions, but some of the changes were more involved. The American delegation had no objection to the subdivision of titles, provided we did not lose the chance for comparison with

the historical background that has been built up within the last thirty years. As an illustration of this theory, we now have a title numbered 46 for "Cancer of the Female Genital Organs." Cancer is exceedingly important and it is essential that we do not lose the opportunity to study the trend of the disease. The proposal was offered to provide a title for "Cancer of the Uterus" with the idea that all other cancers of the female genital organs would be classified under the residual title of "Cancer of Other Organs." To this the American delegation did not agree at all. We had no objection to the introduction of the title of "Cancer of Uterus" but insisted that if this was done, a title should be provided for cancer of the other female genital organs. Then, by adding two items together we could still make comparison with our existing list. Fortunately, we were able to secure the support of the British delegation and to get this arrangement.

While we are speaking of cancer, there was one interesting and important change made. Following the cancer, we now have a title, "Benign Tumors and Tumors not Returned as Malignant." The new list provides two numbers, one for non-malignant tumors (a) of the female genital organs and (b) other organs, and a new title for tumors the character of which is unknown or not specified as malignant, with the subdivisions (a) and (b) the same as above.

A very decided effort was made on the part of some of the delegates to take tabes dorsalis and paresis out of the group now entitled "diseases of the nervous system" and put them in following syphilis. To this the conference would not agree.

As the present classification provides first for the group of infectious diseases and second a group known as general diseases, under the new classification the second group will be cancer and other tumors. The third group will include rheumatism, diseases of nutrition and of the endocrine glands and other general diseases. This is followed by a special group for diseases of the blood and in group V chronic poisoning and intoxication. This includes three titles: (1) Alcoholism; (2) Chronic poisoning by mineral substances; and (3) Chronic poisoning by organic substances.

This subdivision of groups will undoubtedly be of very considerable value when we have a few years' history to build up comparability.

From this point on the group subdivisions are the same as in the present list,

making a total of 18 groups where we now have 15.

Some important changes were made in regard to puerperal causes. For instance, under title 140 we will have abortions with septic conditions. Under the present system all sepsis goes to the title puerperal septicemia, regardless of whether the sepsis developed as a result of abortion or labor. Title 141, Abortions without mention of septic conditions, but to include hemorrhage; 142, Ectopic gestation, which is now included under accidents of pregnancy; and 143, Other accidents of pregnancy, but not including hemorrhage. Title 144 will include Puerperal hemorrhage (a) Placenta Previa and (b) Other hemorrhages; and 145, Septicemia not specified as being due to abortion; (a) Puerperal septicemia and pyemia and (b) Puerperal tetanus; 146, Albuminuria and eclampsia; 147, Other forms of toxemia; and 148, Phlegmasia alba dolens, embolus and sudden death not specified as septic; 149, Other accidents of labor, and 150, Other puerperal conditions not specified.

In connection with the early infancy I am inclined to think that these subdivisions are somewhat better than we have been using. Under the general title of congenital malformations there will be five facultative subdivisions: (a) Hydrocephalus, (b) Spina bifida and meningocele, (c) Congenital malformations of the heart, (d) Monstrosities, and (e) Others. Under the group of diseases of early infancy will come 158, Congenital debility; 159, Premature birth, which is the most important single cause of death of infants; and 160, Consequences of labor, (a) with Caesarean operation and (b) Others; 161, Other diseases peculiar to early infancy.

Probably the most difficult thing that met the American delegation was the treatment of violent deaths. They do not have as many violent deaths in Europe as we have in this country, if we omit the question of war, and it was very difficult to get the conference to consider seriously our position in this matter. We did succeed in getting a fairly good list, although not all we asked, but they insisted upon providing a classification for deaths due to wounds of war and another title for the execution of civilians by belligerent armies and also a title for judicial execution, which, of course, does not interest us in Michigan at the present time.

As a whole I am inclined to think that the American delegation fared very well, considering the fact that the general feel-

ing was none too friendly, owing to our failure to become a member of the League of Nations. The fact that we had very definite ideas as to what we wanted, whereas, many of the other delegations were wholly unprepared, I think helped a lot.

Anyone who attempts to study this list will undoubtedly feel as the delegates did—that we could do much better if we scrapped the entire list and started out fresh, but the objection to this is the fact that we would lose much valuable data through loss of comparability.

I feel that a word of commendation is due to the Russian delegation, who prepared a printed proposition along these lines. They have done an enormous amount of work and presented a very creditable list based entirely upon an etiological basis, but could not be considered because of the general feeling that we cannot afford to lose comparability. One of the foreign delegations insisted that all classification should be made on an anatomical basis. For instance, they wanted to scatter cancer through the list on the basis of the organ involved, such as cancer of the stomach going to diseases of the stomach, cancer of the intestines going to diseases of the intestines, cancer of the liver going to diseases of the liver, etc. Naturally the American delegation would not stand for this because of the fact that the average scientist who is studying cancer is interested in cancer as a whole problem, and not in cancer of any one organ. Then, too, often there is more than one organ involved, and in many cases metastasis, so that it would be exceedingly difficult to classify on this basis.

It is, of course, true that in the preparation of this list the work has in a measure only begun. The question of inclusions under each of these titles is an exceedingly important one, but will be arranged on the basis of the new titles.

Many physicians are familiar with what is known as the Joint Cause List. This had been in use in the United States for a number of years and provides the proper classification for those cases in which two or more definite causes of death are stated, either of which might prove fatal. As an illustration, where a cause of death is given as bronchopneumonia with a contributory of measles, or as measles with a contributory of bronchopneumonia, it is evident that there must be some definite plan for the classification of such a certificate. If this is not done we could not

fairly compare the records of two different places, and the Manual of Joint Causes provides just this information so that the records throughout the states of the United States and the Bureau of Census are uniform.

No other country in the world is using this same method of handling joint causes and the American committee corresponded with the entire list of delegates to the conference in the hope to secure the adoption of a manual for this purpose, offering the American manual as a make-shift to serve until some international committee would produce a better one. This correspondence was conducted by Mr. Van Buren of the Metropolitan Life Insurance Company, whom I regard as one of the leading nosologists in the United States. Our efforts in this direction, however, were not very well received, but we did secure the appointment of an international committee to go into the subject. It is improbable, however, that we can hope for any united or official action until the next decennial meeting, which will be held in 1939.

From a personal standpoint I may say that it was something of a thrill to meet with 70 men who are supposed to be the outstanding men of the world in their specialty and while this subject of nosology is a rather highly technical specialty, it is a most interesting and important one because the great bulk of our medical effort in the saving of human life is based on our own experience and the experience of others, which latter experience is best available when expressed in statistical terms wherein the experience of large numbers is brought together for study and guidance.

MEDICAL MEETINGS

There is so much for reflection and present day application that we are publishing these verses, written by Holmes. It could be made aply modern if we changed the names of drugs to ultra-violet, radium, infra red diathermy, vibrator, seras, vaccines, etc. We trust you will be entertained.

RIP VAN WINKLE, M. D.

By Oliver Wendell Holmes

An after-dinner prescription taken by the Massachusetts Medical Society, at their meeting held May 25, 1870.

CANTO FIRST

Old Rip Van Winkle had a grandson, Rip,
Of the paternal block a genuine chip;
A lazy, sleepy, curious kind of chap;
He, like his grandsire, took a mighty nap,

Whereof the story I propose to tell
In two brief cantos, if you listen well.

The times were hard when Rip to manhood grew;
They always will be when there's work to do;
He tried at farming—found it rather slow—
And then at teaching—what he didn't know;
Then took to hanging round the tavern bars,
To frequent toddies and long-nine cigars,
Till Dame Van Winkle, out of patience vexed
With preaching homilies, having for their text
A mop, a broomstick—aught that might avail
To point a moral or adorn a tale,
Exclaimed, "I have it! Now then, Mr. V.!
He's good for *something*—make him an M. D.!"

The die was cast; the youngster was content;
They packed his shirts and stockings and he went.
How hard he studied it were vain to tell;
He drowsed through Wistar, nodded over Bell,
Slept sound with Cooper, snored aloud on Good;
Heard heaps of lectures—doubtless understood—
A constant listener, for he did not fail
To carve his name on every bench and rail.
Months grew to years; at last he counted three
And Rip Van Winkle found himself M. D.
Illustrious title! in a gilded frame
He set the sheepskin with his latin name,
RIPUM VAN WINKLUM? QUEM we —

SCIMUS—know

IDONEUM ESSE—to do so and so;
He hired an office; soon its walls displayed
His new diploma and his stock in trade,
A mighty arsenal to subdue disease,
Of various names, whereof I mention these:
Lancets and bougies, great and little squirt,
Rhubarb and Senna, Snakeroot, Thoroughwort,
At. Tart., Vin. Colch., Pil. Cochiae, and Black
Drop,

Tinctures of Opium, Gentian, Henbane, Hop,
Pulv. Ipecacuanhae, which for lack
Of breath to utter men call Ipecac,
Camphor and Kino, Turpentine, Tolu,
Cubebs, "Copeevy," Vitriol—white and blue,
Fennel and Flaxseed, Slippery Elm and Squill,
And roots of Sassafras, and "Sassaf'rill,"
Brandy—for colics—Pinkroot, death on worms—
Valerian, calmer of hysteric squirms,
Musk, Assafoetida, the resinous gum
Named from its odor—well, it does smell some—
Jalap, that works not wisely, but too well,
Ten pounds of Bark and six of Calomel.
For outward griefs he had an ample store,
Some twenty jars and gallipots, or more;
Ceratum simplex—housewives oft compile
The same at home, and call it "wax and ile;"
Unguentum Resinosum—change its name,
The "drawing salve" of many an ancient dame;
Argenti Nitras, also Spanish flies,
Whose virtue makes the water-bladders rise—
(Some say that spread upon a toper's skin
They draw no water, only rum or gin)—
Leeches, sweet vermin! don't they charm the
sick?

And Sticking-plaster—how it hates to stick!
Emplastrum Ferri—ditto *Picis*, Pitch;
Washes and Powders, Brimstone for the—which,
Scabies or *Psora*, is thy chosen name,
Since Hahnemann's goose-quill scratched thee
into fame,

Proved thee the source of every nameless ill,
Whose sole specific is a moonshine pill,
Till saucy Science, with a quiet grin,
Held up the *Acarus*, crawling on a pin?
—Mountains have labored and have brought forth
mice:

The Dutchman's theory hatched a brood of—
twice
I've well-nigh said them—words unfitting quite
For these fair precincts and for ears polite.

The surest foot may chance at last to slip,
And so at length it proved with Doctor Rip.
One full-sized bottle stood upon the shelf
Which held the medicine that he took himself;
Whate'er the reason, it must be confessed
He filled that bottle oftener than the rest;
What drug it held I don't presume to know—
The gilded label said "Elixir Pro."

One day the Doctor found the bottle full,
And, being thirsty, took a vigorous pull,
Put back the "Elixir" where 't was always found,
And had old Dobbin saddled and brought round.
—You know those old-time rhubarb-colored nags
That carried Doctors and their saddle-bags;
Sagacious beasts! they stopped at every place
Where blinds were shut—knew every patient's
case—

Looked up and thought—the baby's in a fit—
That won't last long—he'll soon be through with
it;

But shook their heads before the knocked door
Where some old lady told the story o'er
Whose endless stream of tribulation flows
For gastric griefs and peristaltic woes.

What jack-o'-lantern led him from his way,
And where it led him, it were hard to say;
Enough that wandering many a weary mile
Through paths the mountain sheep trod single
file,

O'ercome by feelings such as patients know
Who dose too freely with "Elixir Pro.,"
He tumbled—dismounted, slightly in a heap,
And lay, promiscuous, lapped in balmy sleep.

Night followed night, and day succeeded day,
But snoring still the slumbering Doctor lay.
Poor Dobbin, starving, thought upon his stall,
And straggled homeward, saddle-bags and all.
The village people hunted all around,
But Rip was missing—never could be found.
"Drowned," they guessed;—for more than half a
year

The pouts and eels *did* taste uncommon queer;
Some said of apple-brandy—other some
Found a strong flavor of New England rum.

—Why can't a fellow hear the fine things said
About a fellow when a fellow's dead?

The best of doctors—so the press declared—
A public blessing while his life was spared,
True to his country, bounteous to the poor,
In all things temperate, sober, just and pure;
The best of husbands! echoed Mrs. Van,
And set her cap to catch another man.

—So ends this Canto—if its *quantum suff.*,
We'll just stop here and say we've had enough,
And leave poor Rip to sleep for thirty years;
I grind the organ—if you lend your ears
To hear my second Canto, after that
We'll send around the monkey with the hat.

CANTO SECOND

So thirty years had past—but not a word
In all that time of Rip was ever heard;
The world wagged on—it never does go back—
The widow Van was now the widow Mac—
France was an Empire—Andrew J. was dead,
And Abraham L. was reigning in his stead.
Four murderous years had passed in savage
strife,

Yet still the rebel held his bloody knife.

—At last one morning—who forgets the day
When the black cloud of war dissolved away?
The joyous tidings spread o'er land and sea,
Rebellion done for! Grant has captured Lee!
Up every flagstaff sprang the Stars and Stripes—
Out rushed the Extras wild with mammoth
types—

Down went the laborer's hod, the schoolboy's
book—

"Hooraw!" he cried—"the rebel army's took!"

Ah! what a time! the folks all mad with joy:
Each fond, pale mother thinking of her boy;
Old Gray-haired fathers meeting—Have—you—
heard?

And then a choke—and not another word;
Sisters all smiling—maidens, not less dear,
In trembling poise between a smile and tear;
Poor Bridget thinking how she'll stuff the plums
In that big cake for Johnny when he comes;
Cripples afoot; rheumatics on the jump,
Old girls so loving they could hug the pump;
Guns going bang! from every fort and ship;
They banged so loud at last they wakened Rip.

I spare the picture, how a man appears
Who's been asleep a score or two of years;
You all have seen it to perfection done
By Joe Van Wink—I mean Rip Jefferson.
Well, so it was; old Rip at last came back,
Claimed his old wife—the present widow Mac—
Had his old sign regilded, and began
To practice physic on the same old plan.

Some weeks went by—it was not long to wait—
And "please to call" grew frequent on the slate.
He had, in fact, an ancient, mildewed air,
A long gray beard, a plenteous lack of hair—
The musty look that always recommends
Your good old Doctor to his ailing friends.
—Talk of your science! after all is said
There's nothing like a bare and shiny head;
Age lends the graces that are sure to please;
Folks want their Doctors mouldy, like their
cheese.

So Rip began to look at people's tongues
And thump their briskets (called it "sound their
lungs"),

Brushed up his knowledge smartly as he could,
Read in old Cullen and in Doctor Good.
The town was healthy; for a month or two
He gave the sexton little work to do.

About the time when dog-day heats begin,
The summer's usual maladies set in;
With autumn evenings dysentery came,
And dusky typhoid lit his smouldering flame;
The blacksmith ailed—the carpenter was down,
And half the children sickened in the town.
The sexton's face grew shorter than before—
The sexton's wife a brand-new bonnet wore—
Things looked quite serious—Death had got a
grip

On old and young, in spite of Doctor Rip.

And now the Squire was taken with a chill—
Wife gave "hot-drops"—at night an Indian pill;
Next morning, feverish—bedtime, getting worse—
Out of his head—began to rave and curse;
The Doctor sent for—double quick he came;
Ant. Tart. Gran. Duo, and repeat the same
If no et cetera. Third day—nothing new;
Percussed his thorax till 't was black and blue—
Lung-fever threatening—something of the sort—

Out with the lancet—let him bleed—a quart—
Ten leeches next—then blisters to his side;
Ten grains of calomel; just then he died.

The Deacon next required the Doctor's care—
Took cold by sitting in a draught of air—
Pains in the back, but what the matter is
Not quite so clear,—wife calls it "rheumatiz."
Rubs back with flannel—gives him something
hot—
"Ah!" says the Deacon, "that goes *nigh* the
spot."

Next day a *rigor*—"Run, my little man,
And say the Deacon sends for Doctor Van."
The Doctor came—percussion as before,
Thumping and banging till his ribs were sore—
"Right side the flattest"—then more vigorous
raps—

"Fever—that's certain—pleurisy, perhaps.
A quart of blood will ease the pain no doubt,
Ten leeches next will help to suck it out,
Then clap a blister on the painful part—
But first two grains of *Antimonium Tart.*
Last, with a dose of cleansing calomel
Unload the portal system—(that sounds well!)"
But when the selfsame remedies were tried,
As all the village knew, the Squire had died;
The neighbors hinted—this will never do,
He's killed the Squire—he'll kill the Deacon, too."
—Now when a doctor's patients are perplexed,
A *consultation* comes in order next—
You know what that is? In a certain place
Meet certain doctors to discuss a case
And other matters, such as weather, crops,
Potatoes, pumpkins, lager-beer and hops.
For what's the use?—there's little to be said,
Nine times in ten your man's as good as dead;
At best a talk (the secret to disclose)
Where three men guess and *sometimes* one man
knows.

The counsel summoned came without delay—
Young Doctor Green and shrewd old Doctor
Gray—
They heard the story—"Bleed!" says Doctor
Green,
"That's downright murder! cut his throat, you
mean!
Leeches! the reptiles! Why, for pity's sake,
Not try an adder or a rattlesnake?
Blisters! Why bless you, they're against the
law—

It's rank assault and battery if they draw!
Tartrate of Antimony! shade of Luke,
Stomachs turn pale at thought of such rebuke!
The portal system! What's the man about?
Unload your nonsense! Calomel's played out!
You've been asleep—you'd better sleep away
Till someone calls you."

"Stop!" says Doctor Gray—
"The story is you slept for thirty years;
With Brother Green, I own that it appears
You must have slumbered most amazing sound;
But sleep once more till thirty years come round,
You'll find the lancet in its honored place,
Leeches and blisters rescued from disgrace,
Your drugs redeemed from fashion's passing
scorn,
And counted safe to give to babes unborn."
Poor sleepy Rip, M. M. S. S., M. D.
A puzzled, serious, saddened man was he;
Home from the Deacon's house he plodded slow
And filled one bumper of "Elixir Pro."
"Goodby," he faltered, "Mrs. Van, my dear!

I'm going to sleep, but wake me once a year;
I don't like bleaching in the frost and dew,
I'll take the barn, if all the same to you.
Just once a year—remember! no mistake!
Cry, 'Rip Van Winkle! time for you to wake!'
Watch for the week in May when laylocks blow,
For then the Doctors meet, and I must go."

Just once a year the Doctor's worthy dame
Goes to the barn and shouts her husband's name,
"Come, Rip Van Winkle!" (giving him a shake)
Laylocks in blossom! 't is the month of May—
The Doctors' meeting is this blessed day,
And come what will, you know I heard you swear
You'd never miss it, but be always there!"

And so it is, as every year comes round
Old Rip Van Winkle here is always found.
You'll quickly know him by his mildewed air,
The hayseed sprinkled through his scanty hair,
The lichens growing on his rusty suit—
I've seen a toadstool sprouting on his boot—
—Who says I lie? Does any man presume?—
Toadstool? No matter—call it a mushroom.
Where is his seat? He moves it every year;
But look, you'll find him—he is always here—
Perhaps you'll track him by a whiff you know—
A certain flavor of "Elixir Pro."
Now, then, I give you—as you seem to think
We can give toasts without a drop to drink—
Health to the mighty sleeper—long live he!
Our brother Rip, M. M. S. S., M. D.!

INSURANCE REPORTS

The following comments are taken from
letters received from insurance companies
in reply to the letter mailed to them on
November 14, 1929, by the Civic and In-
dustrial Relations Committee, which con-
tained the resolution passed by the State
Society at its meeting in Jackson, Septem-
ber 17, 1929, and solicited the friendly co-
operation of the insurance companies:

OLD LINE LIFE INSURANCE COMPANIES

American Central Life Ins. Co., Indianapolis,
Ind., November 18, 1929:

"We consider the conditions and the fee stipu-
lated in this ruling very fair and consistent. We
shall be very glad to comply therewith."

J. M. Smith, Medical Director.

Berkshire Life Ins. Co., Pittsfield, Mass., No-
vember 19, 1929.

"It seems to me that the action of your organ-
ization is perfectly proper and that there should
be no objection on the part of any insurance com-
pany to a proper payment for such services."

Secretary.

Home Life Ins. Co., New York City, November
19, 1929.

"The fee charged by a former attending physi-
cian for this additional report, which under our
system is obtained by the applicant, not by the
company, is, as we previously stated, quite evi-
dently a matter of adjustment between him and
his physician."

W. S. Gaylord, Vice-Pres't., and Sec'y.

Kansas City Life Ins. Co., Kansas City, Mo.,
November 18, 1929.

"Regarding medical fees for information given

to insurance companies by attending physicians, would say that this is entirely satisfactory to our company and we will be governed thereby in the future."

H. A. Baker, Medical Director.

Lafayette Life Ins. Co., Lafayette, Ind., November 18, 1929.

1. "Will you be good enough to advise the writer the makeup of the committee" Was this committee made up wholly of physicians belonging to the State Medical Society, or was there in the conference Medical Directors or Executive Officers of insurance companies, i. e. in your study were you able to get both sides of the question?"

2. "Is there a different fee requested from fraternal and assessment companies from that of 'Old Line' companies, and if so, will you be good enough to advise us what fee they are asked to pay?"

3. "Will you be able to recommend to the insurance companies, physicians who are dependable and can give reliable and trustworthy examinations to life insurance companies? If a plan of this sort could be put through by which the life insurance companies could feel that they could appoint examiners who had the endorsement of the State Medical Society, much of the trouble would be behind us.

"We wish to assure you that we are willing and anxious to co-operate in any movement that will tend to smooth out any situation that at the same time may be of benefit in general."

M. M. Lairy, Medical Director.

Missouri State Life Ins. Co., St. Louis, Mo., November 19, 1929.

"I am glad to say that this company for several years has been allowing a fee to attending physicians for information which we request regarding persons applying to us for insurance."

B. Y. Jaudon, Medical Director.

National Life Assurance Co. of Canada, Toronto, Ont., November 18, 1929.

"We shall be pleased to fall in with what you suggest in your letter which is our practice, and I take this opportunity of saying to you that if medical examiners for life insurance companies take their duties seriously they are in a position to give us full value for what we pay them."

Albert A. MacDonald, Dir. Medical Service.

Peoria Life Insurance Co., Peoria, Illinois, Dec. 5, 1929.

"We desire to signify our willingness to pay the nominal fee of \$2.00 for information affecting the insurable status of life insurance risks."

F. A. Causey, Associate Med. Director.

Providential Mutual Life Ins. Co., Philadelphia, Pa., Nov. 18, 1929.

"The only way I can see that it might possibly affect us would probably be that the members of your Society are only willing to place this information in the hands of the applicant himself, so that he can send it to the insurance company. It comes down to the old question of whom the prescription belong to, that is, to the patient or to the doctor. We have always written that if there was any fee charged for this information it would have to be borne by the applicant."

Herbert Old, Ass't. Medical Director.

Register Life Insurance Co., Davenport, Iowa, Nov. 22, 1929.

"When we require a physician's statement from a policy-holder or an applicant for insurance we

make it a practice to advise the policy-holder or applicant that he is to furnish such information at his own expense. In the rare cases in which our company asks for a service from a physician not our own examiner we are perfectly willing to pay him a proper fee."

G. E. Decker, Pres. & Med. Director.

HEALTH AND ACCIDENT INSURANCE COMPANIES

Commercial Casualty Ins. Co., Newark, N. J., Nov. 19, 1929.

"I am inclined to believe that it is going to develop considerable friction and will in a way perhaps make it rather difficult for claims to be adjusted promptly and perhaps will deprive some of the policy-holders of indemnity to which they may otherwise be entitled."

F. W. Benjamin, Manager.

Globe Indemnity Company, Newark, N. J., Nov. 19, 1929.

"This company makes a practice of cooperating with the physicians and surgeons that it comes in contact with in the course of its business, to every possible extent consistent with the equities involved."

F. H. Kingsbury, Vice-President.

Home Mutual Benefit Ass'n, Petoskey, Mich., Nov. 18, 1929.

"I feel that this will be a blow to small policy holders and I feel that Doctors are getting good pay and this is a charge on many poor people. For large policies or old line insurance it would be all right, but small holders—No."

N. J. Stone, Secretary.

Hoosier Casualty Company, Indianapolis, Ind., Nov. 21, 1929.

"If this is done by your Medical Society then the policy holders must pay the bill. It seems however, to us that it is an imposition as these policy holders can much easier pay their doctor bills by carrying a disability policy and it only insures more securely the payment of the doctor's bill by carrying this protection than where they do not carry such protection. Frankly I cannot possibly agree with your proposed method."

C. W. Ray, President.

Income Guaranty Company, South Bend, Ind., Nov. 19, 1929.

"We cannot agree that the responsibility for the payment of a fee to the physician for preparing insurance reports rests with the insurance company and we do not seem to be prepared to enter into any agreement to the effect that our company will pay such a fee.

"It seems rather inconsistent to the writer to read of the physicians in one state getting together and writing a story of being underpaid professionally when the physicians in another state seem to be working toward the point of lowering the physician's charges, seemingly admitting that bills and fees for medical and surgical attention have been and are generally too high."

John G. Malmberg, President.

Interstate Business Men's Accident Ass'n, Des Moines, Iowa, Nov. 20, 1929.

"We can see no reason why it is not perfectly legitimate for the physicians to charge the fees they feel to be fair and proper for the completion of preliminary and final claim blanks. The whole question has been very interesting to us and it

is our belief that the committee has reached a very happy solution of their problem."

Manager Claims Department.

National Casualty Co., Detroit, Mich., Nov. 16, 1929.

"The matter is interesting as news to us but will not be otherwise because under the laws of Michigan and as incorporated in the policies of accident insurance, policy holders are obligated to furnish written notice and written proof so the matter of charges for anything furnished to them by the members of your society is a matter of adjustment for them and a subject upon which we have no opinion."

W. G. Curtis, President.

New York Casualty Co., New York, Nov. 20, 1929.

"The major portion of the resolution is not of serious interest to us, but I wish to take exception to that portion of the resolution which exempts a physician from making affidavit to statements made by him on the claim proofs. I can see no reason why the physicians should object to making any such affidavit if his statements are correct, and certainly if they are not correct it is of the utmost importance that they be in affidavit form."

Everett Taylor, Vice-President.

Members are urged anew to adhere to the resolutions passed at the Jackson meeting. It is further recommended by the committee that the resolutions be re-read at the next meeting of your society.

COMMITTEE ON CIVIC AND INDUSTRIAL RELATIONS

The Civic and Industrial Relations Committee of the Michigan State Medical Society held a meeting at the Book-Cadillac Hotel, Detroit, December 9, 1929, at 5:30. The following members were present:

Drs. C. D. Munro, Jackson
C. S. Gorsline, Battle Creek
A. R. McKinney, Saginaw
H. F. Dibble, Detroit
L. O. Geib, Detroit
H. S. Collisi, Grand Rapids, Chairman.

Dr. J. R. Rupp, Chairman of the Wayne County Medical Society Civic and Industrial Relations Committee was also present.

Four questions were discussed. This communication conveys to each committee member the substance of the discussion and action taken. Space is left beneath each subject in which to make criticisms and suggestions. Kindly return the report with your notations to the Chairman, who will then be guided by the majority of recommendations.

1. INSURANCE RESOLUTIONS

The Chairman informed the committee that the two resolutions, one regarding Old Line Life Insurance Companies and the other the Health and Accident Insurance Companies, were placed in effect on December 1, 1929. The individual insurance companies have been notified by letter of the adoption of the two resolutions by the House of Delegates of the State Society at the Jackson meeting.

Letters containing the reaction of some of the insurance companies have been received. The majority of Old Line Life Insurance Companies

have been favorable to the action taken. The Health and Accident Companies have been less favorable. Extracts from these letters have been given to the Secretary of the State Society, who desires to use them for publication.

One of the questions asked was whether the State Medical Society possessed a list of physicians eligible as insurance examiners and whether this would be furnished to insurance companies. The committee believed it unwise for the State Society to undertake furnishing such a list for the reason that this would involve discrimination and be unfair to the physicians.

The committee believed that the State Secretary should notify each county society by letter of the action taken on the resolutions and to urge their members to strictly adhere to them. Dr. Warnshuis has agreed to send such a letter to the county societies requesting it to be read at two successive meetings in order to surely convey the information to each member.

2. INDUSTRIAL CLINICS

The resolution passed by the State Society at the Jackson meeting relative to industrial clinics was the main topic of discussion. The discussion seemed to indicate that there were many violations of the Medical Practice Act occurring in first-aid factory clinics. First-aid men and practical nurses, poorly equipped, lacking in experience and without any knowledge of aseptic technique, were undertaking minor surgery. This was considered a practice that should be immediately discontinued and inasmuch as industrial physicians and surgeons come in closest contact with this situation, it was believed that they could act as the best informants.

Dr. Gorsline, President of the recently revived Industrial Physicians & Surgeons Association of Michigan, informed the committee that their association would meet in Flint in April. He has appointed an Industrial Relations Committee, of which Dr. R. H. Denham of Grand Rapids is Chairman. It was suggested that the State Society Chairman and the Industrial Physicians & Surgeons Society Chairman cooperate with each other in the analysis of these industrial problems.

It was proposed that as soon as the Industrial Physicians & Surgeons Association began to function that they could better take the responsibility of reporting violations and undertaking to correct them, while the Civic and Industrial Relations Committee of the State Medical Society could undertake educational measures with Nurses' Associations, Chambers of Commerce and Manufacturers Associations, emphasizing the need of competent medical care for employees.

The attention of the county societies could be called to the fact that the factory first-aid man is a menace to employees unless he is under the strictest medical supervision. Instances were cited where employers had reacted unfavorably toward physicians' advice that the practice be discontinued in their plants and one member of the committee stated that he had lost one of his factories because of the policy he wished to adopt regulating the first-aid man.

The Chairman was requested to secure a list of all factories having first-aid departments from Dr. F. A. Poole, Michigan Department of Health, Lansing, Michigan, whom it was believed could supply this information. Some knowledge could then be obtained of the number of first-aid clinics throughout the state. One suggestion was that first-aid clinics be licensed and pay a fee to the

state, which would cause them to come under proper supervision.

The committee agreed that a letter should be sent to each county society calling their attention to the trend of first-aid clinics to violate the Medical Practice Act, and that physicians are soliciting factory work by contract, underbidding the others.

3. RESOLUTION MAKING HOSPITALS' AND PHYSICIANS' BILLS PRIOR CLAIMS

The resolution making settlement claims subject to prior liens of hospitals and physicians for services rendered for injuries received in automobile accidents, passed at the State Society, was next discussed.

It was believed that public reaction would be against physicians taking the initiative to secure legislation making physicians' and hospitals' bills prior claims of settlement for damages received in automobile accidents. After discussion, it was decided that the hospitals really represent the people themselves and that any action taken should originate from this group rather than the Medical Profession. The Chairman was instructed to confer with the President of the Michigan State Hospital Association and see what could be done in starting this movement, pledging the assistance of this committee in furnishing any statistics or information relating to the Medical Profession.

4. APPOINTMENT OF CIVIC RELATIONS COMMITTEE FOR COUNTY SOCIETIES

HEALTH AND ACCIDENT INSURANCE COMPANIES

There is an apparent lack of civic interest among physicians and physicians' associations at the present time. It was believed that a closer contact should be established with the public in order to promote a high standard of medical practice in each community and that the public should be urged to use physicians as speakers in programs where health education and civic enterprises were involved. Physicians should take as much interest in politics as the average layman, and should stand ready to serve their community, county or state whenever called upon. Active spokesmanship by legislators from the Medical Profession should be established on the floor of the State Legislature. Each community has at least one physician who could so qualify, particularly from some of the outlying districts. There should also be closer contacts with Boards of Commerce, Parent-Teacher Associations and particularly Boards of Health.

It was recommended that the Council of the Michigan State Medical Society be advised of the strong necessity for a Civic Relations Committee in each county society, whose duty would be that of establishing a contact with all civic enterprises and taking an active part in all matters where health, hygiene and sanitation were involved. The following resolution adopted by each county society could serve as a stimulus to arouse interest in this field:

"That the President appoint a Civic Relations Committee consisting of five members, whose function shall be to take an interest in all worthy civic and lay activities; to study them and report of them to the Society; to provide a corps of qualified speakers available for service in all lay organizations in the community; and to offer the services of these speakers in local programs whenever it is deemed advisable."

The Chairman again wishes to state that he will keep each member informed from time to time of developments of sufficient importance. A second meeting will be called in Grand Rapids during the month of June.

Very sincerely,

H. S. COLLISI,
Chairman, Civic and Industrial Relations
Committee.

MIDLAND COUNTY

On Wednesday, December 11th, the members of Midland County Medical Society met and elected for year 1930: For President, Dr. C. V. High, Jr., Midland; Secretary Dr. E. J. Dougher, Midland, Mich.

MUSKEGON COUNTY

At the annual meeting of the Muskegon County Medical Society the following officers were elected for the coming year:

Dr. Pitt S. Wilson, President; Dr. Henry J. Pyle, Vice President; Dr. R. J. Douglas, Secretary-Treasurer; Dr. F. W. Garber, Sr., Delegate to the State Convention; Dr. C. J. Bloom, Alternate Delegate to the State Convention; Dr. George L. LeFevre, Medical Convention Advisor.

R. J. Douglas, Secretary.

ALPENA COUNTY

Following are the newly elected officers of the Alpena County Medical Society for 1930:

Dr. C. A. Carpenter, Onaway, President.
Dr. D. A. Cameron, Alpena, Vice-president.
Dr. W. B. Newton, Alpena, Sec.-Treas.
Dr. E. L. Foley, Alpena, Delegate.
Dr. A. R. Miller, Harrisville, Alternate.
Dr. E. L. Foley, Alpena, Legal Representative.

I will be with you in Chicago at your meeting of the County Secretaries in January, unless sickness should prevent.

Yours fraternally,
W. B. Newton, Secretary.

SHIAWASSEE COUNTY

At the annual meeting of Shiawassee County Medical Society, December 12th, at Memorial Hospital, Owosso, the county health unit plan was discussed and endorsed after listening to a report by a committee which had visited Cadillac and corresponded with several in Genessee and Oakland counties. The election of officers for 1930 resulted as follows:

President, Dr. F. A. Watts, Owosso; Vice President, Dr. R. W. Teed, Owosso; Secretary-Treasurer, Dr. W. E. Ward, Owosso; Delegate, Dr. W. F. Weinkauff, Corunna; Alternate, Dr. W. E. Ward, Owosso; Medico-Legal Representative, Dr. A. M. Hume, Owosso; Board of Directors, Doctors I. W. Greene, Owosso; A. L. Arnold, Jr., Owosso, and C. A. Crane, Corunna.

BAY COUNTY

The annual meeting was held Wednesday evening, December 11th, at the Wenonah Hotel with 52 present.

Dr. Laurence, retiring president, was host to the members with a delightful banquet.

The annual reports showed a membership of 66 and a cash balance in the treasury of \$137.40.

Dr. E. A. Hoyt was elected to local honorary membership.

Dr. Lawrence delivered a very interesting and unique address on "Medical Economics."

The annual election of officers resulted as follows:

President, Dr. Chas. W. Ash; Vice President, Dr. F. S. Baird; Secretary-Treasurer, Dr. L. Fernald Foster; Medico-Legal Adviser, Dr. A. W. Herrick; Delegate, Dr. H. P. Lawrence; Alternate, Dr. A. D. Allen; Censor, Dr. A. W. Herrick.

L. Fernald Foster, Secretary.

INGHAM COUNTY

The Ingham County Medical Society has just finished a most profitable year under the guidance of President L. C. Towne. The meetings have been of a very high order and the attendance has been universally good. Among those who addressed the Society this year were Doctors Belote and Pierce of Ann Arbor, Dr. W. P. Simpson of Dayton, Ohio; Doctors C. J. Marinus and Thomas B. Cooley of Detroit, and Dr. James G. Carr of Chicago. The annual meeting was held December 10, 1929, and the following officers for 1930 were elected: President, Dr. D. A. Galbraith; Vice President, Dr. Ford DeVries; Secretary, Dr. L. M. Snyder, and Treasurer, Dr. T. I. Bauer. Following this a dinner dance was held at the Lansing Country Club.

The Society was also entertained upon this occasion by Dr. N. Sinai of the Department of Hygiene of Ann Arbor, who gave a very interesting and instructive talk on "The Cost of Medical Care." The Society has several interesting projects in view for the coming year and is looking forward to the coming meetings with enthusiasm.

L. M. Snyder, Secretary.

IONIA-MONTCALM COUNTY

The annual meeting of the Ionia-Montcalm Society was held at the Hotel Belding, on December 10th, 1929, with 26 members present; Dr. I. S. Lilly presiding.

Following the dinner the president appointed a nominating committee consisting of Doctors Maynard, Stanton and Hansen. The business meeting was then deferred until immediately after the program.

The scientific program, arranged by Dr. Pinkham, consisted of two very excellent papers: "Genito-Urinary Diagnosis from the Standpoint of the General Practitioner," by Dr. William J. Butler, of Grand Rapids, and Dr. O. H. Gillette, also of Grand Rapids, spoke on the subject of "Surgical Diagnosis of the Left Upper Quadrant."

The nominating committee then reported selections of officers for the coming year: President, Dr. Perry C. Robertson, of Ionia; Vice President, Dr. L. E. Bracey, of Sheridan; Secretary-Treasurer, Dr. John J. McCann, of Ionia; Dr. I. S. Lilly, of Stanton, and Dr. H. B. Weaver, of Greenville, delegate and alternate delegate to the State Meeting. The report of the nominating committee was adopted.

The meeting then adjourned until January 14th at Greenville.

MACOMB COUNTY

The following is an outline of the work of the Macomb County Medical Society for the year 1929:

January meeting. A paper by Dr. Hubert E.

Northrup. Subject—Death related to everyday Obstetrical Practice.

February Meeting. Dr. E. Poos. Subject—Infections of the Head.

March Meeting. Dr. W. N. Brailey. Subject—Obscure Fevers in Children.

April Meeting. Dr. Guy L. Kiefer. Subject—The Establishment of a County Health Unit.

May Meeting. Speaker Rev. Sidney Eva. Subject—Relationship of the Physician to the Clergyman.

June Meeting. Business Meeting.

July Meeting. Dr. Frank S. Perkin. Subject—General Considerations in the Treatment of Diabetes Milletus.

September Meeting. Dr. E. J. O'Brien. Subject—Chest Surgery.

October Meeting. Dr. A. M. Wehenkel. Subject—Home Treatment of selected Tuberculosis Patients.

November Meeting. Dr. Charles W. Peabody. Subject—Early Recognition of Bone Tuberculosis.

December Meeting. Business Meeting and Nomination and election of Officers. The following officers were elected for the year 1930:

President—Dr. T. P. Russell, Centerline, Mich.

Vice-president—Dr. A. A. Thompson, Mt. Clemens, Mich.

Secretary—Dr. J. N. Scher, Mt. Clemens, Mich.

Treasurer—Dr. W. H. Norton, Mt. Clemens, Mich.

Respectfully submitted,
J. N. Scher, Secretary.

LENAWEE COUNTY

The December meeting of the Lenawee County Medical Society was held in the Adrian Club the evening of December 3rd. The occasion was the annual banquet and Ladies' Night. We were hosts this year of Washtenaw, Monroe, Hillsdale and Fulton County (Ohio) Societies. About 100 doctors and ladies sat down to a very satisfactory dinner.

The preliminaries were rapidly disposed of by President Marsh, as Dr. Crile of Cleveland was the guest of the evening, and we wished to allow him to have all the time that he wished. Among the distinguished guests were Dr. Bruce of Ann Arbor, chief of the Department of Post-Graduate Study; Dr. Haynes, Superintendent of the University Hospital; Dr. F. E. Andrews, Mayor of Adrian and the oldest physician in years of practice in the county. Dr. Andrews graduated from the U. of M. in 1878. Also Dr. R. M. Eccles of Blissfield, an honorary member of the Michigan State Medical Society, over 50 years in practice, and Dr. Fenton of Reading, Secretary of the Hillsdale Society, almost 53 years in practice, were introduced. Dr. Fenton was a graduate of the Detroit College of Medicine and Surgery in the class of 1876.

After presenting the officers of the Societies represented, nearly all of whom were present, Dr. Crile was introduced to the audience. He talked for an hour and a half, and during the whole time he held the attention of all so closely that it seemed as if he were only started when he was forced to close that he might catch a train for home. His subject was the intensely interesting work which is being carried out in the Cleveland Clinic on the cause of peptic ulcer. Starting

from the single cell, which they have proven to be an electric battery, he gradually built up his demonstration that the whole living being, both animal and vegetable, is a series of electric batteries. When the electric potential drops to zero, the animal or plant is dead. Carrying this demonstration up to the different organs, they have proven that the acid-alkaline border at the pylorus has a high potential, and as soon as the acidity of the stomach is increased, the potential increases proportionately, thus causing a destruction of the tissues by electrolysis. The thyroid is considered as the generator of the energy, and the suprarenal as the organ which causes the energy to be transformed into work. Left suprarenalectomy has been tried in stubborn cases of peptic ulcer which have had as many as two gastro-enterostomies without permanent help, and so far the result has been satisfactory.

At the close of Dr. Crile's talk, we all felt that we had been in communion with a master mind, and that we were well repaid for the labor of arranging so large a meeting.

C. H. Westgate, Secretary.

BERRIEN COUNTY

The Berrien County Society held their November meeting in joint session with the Cass County Society at Dowagiac on Thursday evening, the 21st. Dinner was served at the Hotel Dixie at 6:30. Following the dinner the combined societies listened to an excellent paper by Dr. Burton R. Corbus of Grand Rapids. Dr. Corbus gave an unusual and interesting discussion on foods and vitamins. It was a general summing up of our present knowledge of the importance of vitamins and certain foods in the treatment of metabolic diseases. A type of paper of interest to surgeon and internist alike and presented in such a manner as to call forth a lot of discussion.

One usually thinks of such a subject being rather dry, yet necessary, but Doctor Corbus presented his topic in such a way that the members present were highly enthused, and the importance of foods in the treatment of disease and post-operative conditions was impressed on everybody in a new way. We cannot recommend too highly Dr. Corbus' paper.

Dr. Boys, councilor for this district, then gave a short talk dealing with the affairs of the State Society and complimenting the Cass County Society on its rejuvenation and affiliation with the Berrien County Society, whereby they still maintain their own identity and yet are able to meet with the Berrien Society and enjoy the scientific programs.

Election of officers for 1930 will take place at the December meeting to be held in Niles.

The Berrien County Society announce the death of Dr. A. L. West of St. Joseph. Dr. West was a native of Georgia and was graduated from Vanderbilt. He has been a resident of St. Joseph since 1924. He has been full time health officer of that city for the past five years. While not active in society affairs he was generally known and well liked. Death was sudden and due to angina pectoris.

Doctor C. N. Sowers, veteran Berrien County surgeon and chief of staff of Mercy Hospital in Benton Harbor, recently returned from Ann Arbor to convalesce following a prostatictomy. He expects to return to active office practice by the first of January.

GRAND TRAVERSE-LEELANAU CO.

The Annual Meeting of the Grand Traverse-Leelanau County Medical Society was held at the Traverse City State Hospital on December 4, 1929.

Preceding the meeting, an operative surgical clinic was held at the J. D. Munson Hospital by Dr. C. E. Boys of Kalamazoo, Michigan, during which he operated on six cases.

A wonderful dinner was served in the chapel of the State Hospital, the society being guests of the retiring President, Dr. George F. Inch.

The following members were present: Doctors Sladek, Kyselka, Gauntlett, Lawton, Swanson, Swartz, F. Holdsworth, M. Holdsworth, Rinear, Inch, Sheets, Hastings, Holliday, Brownson, Minor and Way. Doctors Boys, of Kalamazoo, Ricker, of Cadillac; Covey, of Traverse City; Evans, Lauer, Williams, Campbell, Norcross, and Mrs. Evans, all of the State Hospital Staff, were invited guests.

Dr. Otto L. Ricker of Cadillac, our Councillor, made a few remarks relative to the Cadillac County Health Unit and the Couzens Pediatric Fund.

The membership committee reporting favorable, Doctors Mode Holdsworth, of Traverse City, and Robert Hastings of Elk Rapids, were elected to our membership.

The following officers for 1930 were elected: President, Dr. L. R. Way, Traverse City; Vice President, Dr. Ralph Kernkamp, Suttons Bay; Secretary-Treasurer, Dr. E. F. Sladek, Traverse City; Medico-Legal, Dr. F. P. Lawton, Traverse City.

Dr. E. F. Sladek presented a paper, "The Rationale of Physical Therapy," in which he reviewed the physiological effects of some of the most important of the physical measures and attempted to show their logical application to certain disease conditions. This paper was illustrated by one reel of motion pictures which showed a number of post injury conditions before and after physical therapy.

Dr. C. E. Boys, of Kalamazoo, showed a reel of motion pictures on "Treatment of Severe Burns," in which he showed the treatment of skin contractures, also their prevention, by means of skin grafts. As the picture was run off, Dr. Boys emphasized the various procedures performed, especially stressing active motion. Dr. Boys showed us what can be done to prevent those deformities which so often follow severe burns.

As a non-medical feature on our program, Dr. Boys showed us four reels of motion pictures taken by himself during his two trips to Alaska, in which he showed most interestingly and vividly the topography and character of this country, also the game present, and the method of hunting it.

A rising vote of thanks was given Dr. Boys for putting on this most wonderful program.

E. F. Sladek, Secretary.

The regular meeting of the Grand Traverse-Leelanau County Medical Society was called to order in the J. D. Munson Hospital by Dr. George F. Inch at 7:45 p. m. on November 5, 1929.

The following members were present: Doctors F. Holdsworth, M. Holdsworth, Murphy, Swartz, Thirlby, Brownson, Inch, Gauntlett, Sheets, Hastings, Way, Minor, Lawton and Kyselka.

Miss Brown, R. N., county nurse, talked upon

the various conditions of health that she finds among the county school children, and asked for co-operation from the society in giving toxin-antitoxin.

The applications for membership of Doctors Mode Holdsworth and Robert Hastings were referred to the membership committee.

The moving picture, "Diagnosis and Treatment of Infections of the Hand," by Dr. Allen B. Kanavel was then shown. This was much appreciated by the members present and it was decided that more medical movies be obtained and shown at later meetings. Dr. E. B. Minor talked on the lectures he had heard by Dr. Kanavel.

Dr. Fred Murphy read a resolution adopted by the Leelanau County physicians in regard to collections.

H. B. Kyselka, Acting Secretary.

JACKSON COUNTY

Today marks the passing of another eventful year in the history of the Jackson County Medical Society.

Our meetings throughout the year have been marked by a splendid attendance, and much interest has been manifested by every member of the Society.

We have been particularly fortunate in securing a splendid list of speakers for our regular meetings, some of whom are the following, together with their subjects:

Dr. W. H. Marshall, Flint, Michigan, "Pain in Relation to Heart Disorders."

Dr. A. D. LaFerte, Detroit, "Fractures."

Dr. Abraham Levinson, Chicago, "Treatment of Meningococcus Meningitis."

Dr. A. M. Mortenson, Battle Creek, Michigan, "Arterio-Sclerosis Associated with Coronary Thrombosis."

Dr. R. L. Kahn, "League of Nations Conference of Serodiagnosis of Syphilis."

Dr. E. Starr Judd, Rochester, Minn., "Physiology of the Liver in Relation to Surgery."

Dr. Clifton F. McClintic, Detroit, "Treatment of Chronic Ulcers, Gangrene, Raynaud's Disease, Buerger's Disease, and Spastic Paralysis by Alcoholic Injection of the Peri-Arterial Sheath."

Dr. William J. Cassidy, Detroit, "Cranio-Cerebral Injuries."

The high spot of our yearly program was of course the entertainment of the State Society in September, which event was attended by a large number of delegates and members from the entire state. The success of this meeting was due in large measure to the very complete arrangements made by Dr. C. D. Munro and his able committee which has it in charge.

Much credit is due my untiring Secretary, Dr. Philip Riley, for his ceaseless interest displayed, and manifold duties performed, which contributed greatly to the year's success. He also displayed marked ability as the editor of our monthly Bulletins, which have been a credit to our Society.

I desire to express my appreciation and thanks to each and every member of the Society for their wonderful co-operation and for their earnest efforts in helping to make the past year the success it has been.

P. R. Hungerford, President.

The November meeting of the Jackson County Medical Society was held Tuesday evening, November 19th, 1929, at the Hayes Hotel. A chicken

dinner was served at 6:30 p. m., following which President Hungerford called the meeting to order.

The minutes of the previous meeting were approved as published in the Bulletin.

Under the heading of old business, the matter of a registry service as outlined in the Bulletin was voted down. Such a service is needed by so few that the cost would be prohibitive.

Dr. Riley suggested that the County Medical Society have a secret committee of three members who are to pass on the worthiness of all promiscuous requests for charity, such as the sale of dance tickets over the telephone. This is not to apply to various charitable organizations and institutions for which it is customary to put on an annual drive for funds. The committee is to be appointed by the President of the Society. Motion was made by Dr. O'Meara that such a plan be adopted; seconded by Dr. Enders. Motion carried unanimously.

Dr. Riley also suggested that the County Medical Society authorize all lawyers and insurance agencies to collect for its various members medical bills at the time of settlement of the claim. Motion made by Dr. Corley that such a resolution be adopted. Motion seconded by Dr. Crowley. Motion carried unanimously.

The name of Dr. N. D. Wilson failed to receive the necessary four-fifths vote for membership.

The name of Dr. Theophile Schmidt was proposed for membership by Dr. Kudner. The name of Dr. Morris Wertenberger was proposed for membership by Dr. Roberts. Both are graduates of the University of Michigan Medical School.

Dr. Riley then read a letter from Dr. F. C. Warnshuis and one from Dr. James D. Bruce urging the members to attend the Pediatric Clinic at Ann Arbor, November 26th, 1929. Dr. Riley also read a letter from Dr. C. H. Westgate at Adrian, urging the members and their wives to attend the Crile meeting in Adrian on December 3rd, 1929.

President Hungerford then turned the meeting over to Dr. Newton, chairman of the day.

Dr. Newton introduced as speaker of the evening Dr. Wm. J. Cassidy, of Detroit. Dr. Cassidy gave a very interesting talk illustrated with lantern slides on "Cranio-Cerebral Injuries; What the General Practitioner Should Know Thereof, What the Surgeon Can Do and Offer as for Relief." Dr. Cassidy's paper was enjoyed by everyone present. His vast experience in such cases renders him an authoritative teacher on the subject. The Society is greatly indebted to Dr. Cassidy for coming to Jackson.

The meeting then adjourned. Attendance, 48.

P. Riley, Secretary.

GRATIOT-ISABELLA-CLARE CO.

The Gratiot-Isabella-Clare County Medical Society closed one of the most successful years we have had under the Presidency of Doctor C. F. DuBois with a dinner and combined meeting with the 9th district Dental Society.

Our speakers were Dr. Boyd S. Gardner, D. D. S., from the Mayo clinic, who spoke on the topic: "The Interdependency of Medicine and Dentistry Illustrated" and Dr. Frederick A. Collier, Prof. Surgery, University of Michigan, whose topic was the "History of Medicine Illustrated."

Dinner was served to seventy-six.

Before the dinner President DuBois called the members together to hear the annual report of the Secretary, which was as follows:

As a matter of record of our society activity

for the year 1929, the following is the list of scientific meetings held:

January 31—Symposium on "Scarlet Fever Immunization." Speaker: Dr. Guy Kiefer, State Commissioner of Health, and Dr. C. C. Young, Director of Laboratories.

February 21—"Medical Impressions of Soviet Russia," illustrated. Dr. Leo Dretzka, Detroit, Michigan.

March 21—"Round-Table Discussion of Society Problems." Dr. Julius Powers, Saginaw, Michigan, Councillor for 8th District.

April 18—"Surgical Common-Places the General Practitioner Should Know," Dr. Clark D. Brooks, Detroit, Mich.

May 9—"The Doctor Looks at the Orient," illustrated. Dr. Louis J. Hirschman, Detroit, Michigan.

June 20—"A Medico-Historical Ramble in Europe," illustrated. Dr. Henry Carstens, Detroit, Michigan.

October 10—Symposium on "Outstanding Advances in Therapeutics in the Past Ten Years."

Speakers: Dr. Richard M. McKean, Detroit, Michigan, and Dr. Daniel P. Foster, Ford Hospital Staff, Detroit, Michigan.

November 14—"Medicine and Surgery of Latin America," illustrated. Dr. Frank Corrigan, Cleveland, Ohio. "New Work in Fractures," Dr. John R. Davis, Toledo, Ohio.

December 6—"Interdependency of Medicine and Dentistry," illustrated. Dr. Boyd S. Gardner, D. D. S., Chief of Dental Service, Mayo Clinic, Rochester, Minn.

"History of Medicine," illustrated. Dr. Frederick A. Collar, Prof. of Surgery, University Hospital, Ann Arbor, Michigan.

During the year we made several innovations in our programs. As a change from strictly scientific programs we interspersed a series of "Medical Travelogue" talks which proved very interesting for the membership. To compensate many of our members for the long distance they had to come to attend meetings, we instituted a full medical evening by having dual-programs, using two speakers on the same or varied subjects.

The following officers were elected for the year 1930:

President—Dr. M. J. Budge of Ithaca, Mich.
Vice-President—Dr. Wm. L. Harrigan of Mt. Pleasant, Michigan.

Secretary-Treasurer—Dr. E. M. Highfield, Alma, Michigan.

E. M. Highfield, Secretary.

CALHOUN COUNTY

The November meeting of the Calhoun County Medical Society was held at the Post Tavern, Tuesday evening, November 5th, 1929.

An unusual number of members were present for the dinner which preceded the meeting. At 7:45 the president, R. V. Gallagher, called the meeting to order, and the Secretary's report, as printed in the Bulletin, Vol. XII, No. 9, was adopted as printed. A bill for \$13.30, covering postage, mailing, record book, telephones, and guests meals was read and ordered paid. The names of Doctors Lyman B. Tibbotts and Howard F. Morse, having been approved by the censors, were unanimously elected to membership in the Society. This brings our total membership up to 123.

The subject of a fee schedule covering the care of indigent cases paid for by the county was discussed, and a motion was made and carried that

a committee be appointed to confer with township health officers and poor commissioners and compile a fee list for adoption.

The following committee was named:

Dr. A. M. Giddings, Dr. Stanley Lowe, and Dr. R. H. Baribeau.

Under Reports of Committee, Dr. R. H. Allen Chairman of the Committee on Clinics, made the following report:

"Your Committee on Clinics beg to make the following report.

"After free discussion and consideration of reports from Kalamazoo, Jackson, Lansing, Flint, Pontiac and other cities, it is recommended for the City of Battle Creek that a full time physician be employed to do health inspection work in the Public Schools, and that no treatment be given by him except first aid in emergency cases."

"It is also recommended that the Board of Supervisors adopt the County Health Unit Plan for health inspection of the schools not included in the City of Battle Creek."

It was moved by Knapp and seconded by Rosenfeld that the report be adopted.

Under discussion, we were fortunate in having with us Dr. Don Griswold, of the State Department of Health at Lansing, who spoke of the work of the state in organizing the County Health Unit. The first step before doing anything to start the County Health Unit plan is to have the endorsement of the Medical Society. This done, the State Department takes up the matter with the County Board of Supervisors. The Rockefeller Foundation co-operates to the extent of \$2,500 a year to help put this plan in operation. The County Plan has in mind the services of a full time physician trained in public health work, two nurses, and an office assistant. The motion was carried.

It was moved that a committee be appointed to co-operate with the Department of Health to carry out this work. Carried.

The following committee was appointed by the President:

1. Dr. H. R. Allen, Battle Creek.
2. Dr. G. B. Gessner, Marshall.
3. Dr. H. B. Keeler, Albion.
4. Dr. L. S. Hodges, Tekonsha.
5. Dr. Clare Derickson, Burlington.

Dr. C. S. Gorsline announced that the School Board of Battle Creek had cooperated in the sending of Hygeia to the schools of the city by paying \$105.00 for the subscriptions sent. Applause.

The first essayist on the program, Dr. John T. Hodgen, of Grand Rapids, was introduced by Dr. Joseph Rosenfeld. Dr. Hodgen gave a learned discussion on Colles' fracture, which was first described in 1814 by Colles, of Dublin. The fracture includes all complete fractures on the lower end of the radius near the wrist. He pointed out that the styloid process of the radius is two and a quarter cm. longer than the ulnar styloid, and this should be considered when trying to reduce this fracture.

1. Alignment.
2. Setting of the muscles at rest in cast.
3. Use of both anterior and posterior splints.
4. Plaster paris ideal.
5. X-Ray before and after reduction.
6. Move fingers from day to day.
7. Little pain if fully reduced.
8. Immediate reduction.
9. Anaesthetic, local or general.
10. Keep under observation.

Discussion was led by Dr. Brainard, who heartily agreed with the essayist in the exposition of his subject. He emphasized the importance of a complete reduction in order to give relief from pain.

Dr. W. A. Brinton, late from the Mayo Clinic, discussed the subject of "Head Injuries." His classification was simple and met with approval.

1. Scalp abrasions.
2. Scalp lacerations.
3. Skull fracture with and without symptoms.
4. Intra-cranial injuries.

Under symptoms he listed the following:

1. Mental disturbances.
2. Headache.
3. Vomiting.
4. Hemorrhage, from eyes, ears, nose, etc.
5. Odema of orbit.
6. Emphasema of the face and scalp.
7. Paralysis of opposite limb.
8. Cranial nerve involvement.
9. Retinal Hemorrhage.
10. Bloody spinal fluid.
11. Variations in blood pressure.

Treatment includes treatment for shock. Decompression, glucose solutions, hypertonic salt solutions, transfusions, etc.

Discussion was quite general by Drs. Gorsline, Riley, Rosenfeld, and Hanson.

Meeting adjourned.

Members present, 55.

HARRY B. KNAPP,
Secretary.

FINANCIAL STATEMENT OF THE CALHOUN COUNTY MEDICAL SOCIETY FOR 1929

Receipts

Balance from last year	\$ 195.36
From Dues	1,807.50
School Board for Hygeia	105.00
Total	\$2,107.86

Expenditures

Secretary's Office—Postage, mailing, addressing, guest meals, phones, telegrams	\$ 128.90
Entertainment program, Speakers	107.50
Audit	10.00
State per capita tax	1,185.00
American Legion advertising	40.00
Printing and Stationery	86.10
Flowers	15.00
Profit on Bulletin (June to June) paid to Secretary	95.95
Hygeia	345.80
Secretary's Fee	50.00
Total	\$2,064.25
Balance on hand	\$ 43.61

PROGRAM REPORT

The following essayists appeared before this Society last year:

December, 1928—Professor Carl Huber, Ann Arbor.

January, 1929—Dr. Plim F. Morse, Detroit.

February—Dr. Channing W. Barrett, Chicago.

March—Dr. Carl A. Hedblom, Chicago; Dr. Willis S. Lemon, Chicago; Dr. William Vis, Grand Rapids.

April—Dr. Hugo A. Freund, Detroit; Dr. A. A. Hoyt, Battle Creek.

May—Dr. Harry E. Mock, Chicago; Dr. A. C. Selmon, Battle Creek.

June—Dr. F. B. Tibbals, Detroit.

September—Dr. J. B. Jackson, Kalamazoo; Dr. L. E. Westcott, Kalamazoo; Dr. R. E. Balch, Kalamazoo; Dr. D. C. Rockwell, Kalamazoo.

October—Dr. C. R. Hills, Battle Creek; Mr. John T. Cleary, Battle Creek.

November—Dr. John T. Hodgen, Grand Rapids; Dr. W. A. Bunten, Detroit.

MICHIGAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS BOARD OF DIRECTORS MEETING—DEC. 6, 1929.

The Board of Directors of the Michigan Association of Industrial Physicians and Surgeons met at Battle Creek, December 6th on invitation of the President, Dr. C. S. Gorsline, to a complimentary dinner at the Post Tavern.

The following physicians who constitute the board were present: President, C. S. Gorsline; Vice President, C. W. Brainard, Battle Creek; Secretary-Treasurer, F. A. Poole, Lansing. Board members: G. C. Penberthy, Detroit; R. H. Denham, Grand Rapids, and Carl F. Moll, Flint.

The principal items considered by the board were the time and place of the annual meeting of the Association and the appointment of committees. It was decided that for the best interest of all concerned, this organization should meet at some other time than during the State Medical Society's annual meeting, to allow more time and undivided attention to discussion of the Industrial Physicians' problems. Accordingly it was decided to hold the annual meeting the 25th of April at Flint. A splendid program of clinics, papers, and addresses with a 6 o'clock dinner is already assured for that day and early evening.

The board appointed the following members on committees for the ensuing year:

1. *Membership*: T. F. Heavenrich, Port Huron; A. W. George, Detroit; W. L. Finton, Jackson; A. R. Hackett, Detroit; Henry J. Pyle, Grand Rapids; A. W. Hornbogen, Marquette.

2. *Program*: C. W. Brainard, Battle Creek; G. C. Penberthy, Detroit; R. H. Denham, Grand Rapids; Geo. J. Curry, Flint.

3. *Arrangements*: C. F. Moll, Flint; J. G. R. Manwaring, Flint; G. J. Curry, Flint; D. L. Treat, Flint; F. E. Reader, Flint.

4. *Publicity*: F. A. Poole, Lansing; Geo. A. Seybold, Jackson; H. S. Collisi, Grand Rapids; A. C. Selmon, Battle Creek; A. H. Whittaker, Detroit; A. C. Christensen, Dearborn; Carl A. Mitchell, Benton Harbor; R. U. Adams, Kalamazoo; V. S. Laurin, Muskegon; F. J. Moloney, Sault Ste. Marie.

5. *Legislation and Industrial Relations*: R. H. Denham, Grand Rapids; Don F. Kudner, Jackson; L. I. Condit, Detroit; E. I. Carr, Lansing; Henry Cook, Flint.

6. *Constitution and By-Laws*: H. N. Torrey, Detroit; J. G. R. Manwaring, Flint; G. C. Penberthy, Detroit.

The increasing interest in this association of industrial physicians is evidenced by the large number of physicians that have joined since the September meeting. It is the desire of the Board of Directors that all present members aid the Membership Committee in enlisting in this organization all those physicians who are engaged in any way in industrial practice.

F. A. Poole, M. D., Sec.-Treas.

WOMAN'S AUXILIARY, MICH. STATE MEDICAL SOCIETY

MRS. L. J. HARRIS, *President*
Jackson, Mich.

MRS. J. EARL MCINTYRE, *Secretary*
Lansing, Mich.

Mrs. L. J. Harris, the newly elected president of the Woman's Auxiliary to the M. S. M. S., has a new plan for the page in the Journal which has been so kindly given us. Mrs. Harris' plan is to have a member of the Executive Committee send in an article each month, dealing on some subject of interest to our auxiliary. Mrs. Peterson of Jackson will have the first article and then we hope to hear from the various members.

We are also very desirous of having items of interest from the various county units as Mrs. Harris feels it is a way of our becoming better acquainted with each other. As we have but one meeting a year we are given very little opportunity to become personally acquainted, while if we read of the activities of the county Auxiliaries it would have a tendency to keep us in touch with each other.

The members of the Jackson County Auxiliary have a pot luck supper and evening together each month when the doctors have their medical meeting. Their members are very much enthused and feel other Auxiliaries might enjoy this sort of meeting.

The members of the Ingham County Auxiliary entertained at a beautiful bridge tea at the Woman's Club House a few weeks ago. All doctor's wives, whether members or not, were invited and fifteen tables were in play. It was a very delightful and successful affair.

A short time ago your secretary received a letter from one of the Auxiliaries asking for what purpose dues to the State Auxiliary were used. For general information Mrs. Harris suggested that we state that this is the first year the State Auxiliary has had any money to handle. The first year we were organized the Michigan State Medical Society appropriated a certain amount for caring for our expense which Dr. Warnshuis had charge of. The county Auxiliaries until a year ago remitted to the state twenty-five cents for each member in good standing. That money was turned over to the National treasurer so we might have recognition in the National organization. The past year several of the County Auxiliaries paid one dollar for each member, in accordance with the constitution and by-laws. From the sum received the only expense incurred has been for stationery, postage and a record book. A motion was made and carried at the last annual meeting that the expense of the members of the Executive Board be paid when attending a meeting. So far the members have not rendered their bills.

The president, Mrs. L. J. Harris of Jackson, or your secretary, will be glad to hear from any members and will be pleased to have items of interest to send into the Journal whenever you may have them.

Mrs. J. Earl McIntyre, Secretary.

THE DOCTOR'S LIBRARY

Offering Suggestions and Recommendations

OUTLINE OF PREVENTIVE MEDICINE, by 21 contributors, the Committee on Public Health Relations, under the direction of the New York Academy of Medicine. Paul B. Hoeber, publisher, New York.

This book is prepared under the auspices of the Committee on Public Health Relations of the New York Academy of Medicine. It is unique in that it is the response of a group of medical practitioners to put together these facts that have to do with preventive medicine, that would be of interest to medical practitioners and students.

The author list is impressive and the subject listed is particularly well chosen. It brings together the facts with regard to the preventive side of the practice of medicine, in all of the various specialties and several subdivisions. In this particular, it will serve a very good purpose and should find a place in the library of all general practitioners.

Unfortunately it does not go into the history of development of any of these lines of endeavor, nor does it develop any of the preventive methods along the lines which they will probably take in the future. It is a book very much for the present and will be a help to many practitioners on that basis.

The chapter on periodic health examinations is particularly good.

The chapter on laboratory aids could have been materially improved by presenting the significance and lack of significance of various laboratory procedures utilized by clinicians, rather than water, sewage, garbage, air, and the like, which are laboratory procedures not utilized by clinicians. A discussion of the significance or lack of significance of a negative Widal test, negative Wassermann test, and a negative diphtheria culture test would have added considerable to this chapter.

The chapter on general medicine is very good except for the omission of certain data concerning scarlet fever, which should be available for the group for which this book was intended.

The section on Allergy could have been made much more useful by a systematic presentation of what the practitioner can do in prevention when a patient comes to his office.

The book is well gotten up, and brings together much of the information which should be available for the general practitioner in the field of preventive medicine. It is well printed on good paper and should meet with a ready response by the forward looking physicians.

The chapter on periodic health examinations if followed carefully will be worth the price of the volume.

USE MAGGOTS TO FIGHT INFECTIONS IN WOUNDS

Maggots, the tiny crawling larvae of blow flies, may prove to be of great value in preventing and checking wound infections. This new method of treating wounds which is now being investigated was developed from observations made during the World War by an American surgeon, Dr. William S. Baer, now clinical professor of orthopedic surgery at the Johns Hopkins University School of Medicine, Baltimore.

Dr. Baer noticed that when the wounded men had been lying out on the ground for some time before being brought to the dressing stations, their wounds were covered with tiny maggots, the larvae from which common flies develop. But these men, strangely enough, did not develop infections in their wounds, as did those whose wounds had been dressed and treated very soon after their infliction. The men who had been lying on the ground untreated the longest and who had the most maggots crawling on their wounds were the ones who did not develop any infections.

Further investigation of this unexpected state of affairs disclosed that the maggots were eating the dead tissues, bone and flesh, and thus destroying the material that would have furnished good breeding ground for bacteria. The bacteria which might have gotten into the wound and set up an infection were unable to exist in the wound which the maggots had cleaned up.

After the war Dr. Baer remembered the action of the maggots when he was treating children suffering from osteomyelitis. This disease is an inflammation of the bone, more common in children than in adults. It is the result of an infection and requires prompt surgical treatment. Recovery is often delayed for years if the disease reaches the chronic stage. In order to hasten the healing of the wound after operating on this condition, Dr. Baer has been using maggots with good results. The tiny creatures consumed all the dead tissue about the wound and the bacteria which had been causing the infection soon died from lack of sustenance.

The investigations along this line were abruptly halted during the first winter, when the cold weather killed the flies and so cut off the supply of maggots. Now, however, this contingency has been provided for, and Dr. Baer has a plentiful all-year-round supply of the tiny creatures.—Science Service.

NEW TEST PREDICTS SUCCESS OF MEDICAL STUDENTS

A test which can be given to students who apply for entrance to medical schools, designed to sort out the students who will make good from the students who are likely to fail, was described by Prof. Fred A. Moss of George Washington University, speaking before the American Association of Medical Schools meeting at Columbia University.

Present methods of selecting medical students notably result in much misplaced energy, and great waste of time and money. Prof. Moss, who is a physician as well as psychologist, pointed out that about 7,100 students started on freshmen courses towards a medical degree last year, and of these more than 1,000 put in a year's study, only to flunk the freshmen course. Medical school officials who picked the 7,100

turned down about 20,000 applications. The usual grounds for selection were the number of pre-medical college credits held by an applicant and his ratings on his college studies.

A psychological test of aptitude for a medical course has been devised by Prof. Moss and two associates, Dr. Oscar B. Hunter and H. F. Hubbard, and an experiment which gauges its efficiency has very recently been conducted, the psychologist explained. Twenty-two medical schools gave the test to their students at the close of the freshmen year to see whether the test could have predicted the students' learning ability.

Among the students who were picked out by the test as the best of the lot, none failed in their courses. At the other end of the scale, among the students rated lowest by the test, 42 per cent failed the freshmen course and 44 per cent were conditioned.

The experiment indicates that by refusing admission to prospective students who fail to pass the aptitude test, a medical school could eliminate 75 per cent of the applicants destined to fail. At the same time the test would eliminate only 12 per cent of the students who would have ranked among the best medical students. The method of selection now used by the schools appears to cut out about 60 per cent of the failures and 38 per cent of the best students.

Prof. Moss' aptitude quiz includes 100 questions on pre-medical subjects, a test of visual memory based on an anatomical drawing, a test of memory based on a passage from an anatomy textbook, and a test of ability to understand and recall a difficult neurological paragraph.—Science Service.

"MIND CURE" IS NOW BECOMING SCIENTIFIC

"Mind cure" is rising from the realm of quackery and becoming a part of scientific medicine, Dr. William A. White, superintendent of St. Elizabeth's Hospital, Washington, D. C., told physicians at the second annual Graduate Fortnight of the New York Academy of Medicine. "One of the most general functions of the human mind is to smooth out inequalities of emotional balance. The healthiest and most normal mind is the mind which is most continuously in a state of emotional equilibrium," Dr. White stated. "A person whose emotions are evenly balanced does not see things out of focus. He is not overly anxious or overly solicitous. He is not too severe nor too complacent. His emotions are reasonably adjusted to the situation as it actually is. He does not see enmity and antagonism where it does not exist, nor does he fear dangers which are only made of thin air." The psychotherapist should have a mind of such type. "The whole psychotherapeutic movement is tending in the direction of facts rather than, as in the past, in the direction of mysticism," Dr. White said. He then explained the present trends followed by psychotherapy, the scientific "mind cure."—Science Service.

DOCTORS IN U. S. PLENTIFUL BUT BADLY DISTRIBUTED

An enormous army of practitioners and assistants exists in this country for the purpose of caring for the sick people and preventing illness among the well. The actual and estimated figures, showing that more than one out of every

hundred in the population are engaged in such activities, have just been compiled by the Committee on the Cost of Medical Care.

"There are in the United States more physicians per 100,000 people than in any other country in the world," the committee reported as a result of one of its surveys which showed that there are 143,000 physicians in the country.

About 1,500,000 people, enough to make a city bigger than Detroit, are employed in connection with the care and prevention of illness, the committee estimated. This figure includes physicians and their attendants, dentists with their assistants and technicians, trained and practical nurses, midwives, physiotherapists, hospital superintendents and personnel, pharmacists and drug clerks, opticians, health department and clinical laboratory personnel, chiropodists, masseurs, and all the "healers," such as Christian Science practitioners, osteopaths and others.

Of these, the 550,000 workers in hospitals, exclusive of nurses, physicians and superintendents, make up the biggest group. The next largest is the group of practical and trained nurses, totaling 351,996, and the third largest comprises the 143,000 physicians.

Uneven distribution of physicians exists throughout the country, which more than the total number, affects the sufficiency.

"In 1927 South Carolina and Montana had only 71 physicians per 100,000 people; California, at the other extreme, had 200," the report says. "Various state surveys show clearly that the larger cities are over-supplied with doctors relative to population, whereas the smaller towns and rural districts are relatively under-supplied. The proportion settling in the larger cities is becoming progressively larger."—Science Service.

NEW DRESS STYLES DRAW CENSURE OF PHYSICIANS

"An unmitigated evil," "unhealthful," "deplorable," "unfortunate" are some of the comments of leading physicians when asked by Science Service to give their opinions of the newest styles of women's dress. These doctors have considered the probable effect on women's health of a return to dress styles of an earlier age. They agree that woman today is healthier than she was in the days of tight-fitting corsets and long, sweeping dresses.

Recalling the long full skirts worn 20 years ago, these physicians also recalled the germ-laden clouds of dust and dried dirt that these skirts raised when women walked along the streets. The trailing skirt was considered a menace to the woman's own health and to that of others about her.

These physicians remembered, too, the tightly-corseted figure of some years ago. They remembered how the liver and spleen were pushed up out of their normal, proper place in the body, and the intestines crowded down by the tight lacing necessary to achieve a "wasp waist."

Of course, the newest dresses are not wasp-waisted, and street dresses do not yet sweep the ground, far from it. However, many forward-looking persons are asking whether the latest fashion of longer skirts, form-fitted dresses and corsets will stop where it is, or whether it will not swing all the way back to the extremes of the gay nineties and the early 1900's.

Long, full skirts, even if they do not reach the ground, and corsets, no matter how loosely-fitting, are hampering to physical activity. Some physicians see harm enough in the new clothes if they do no more than keep women from engaging in the healthful athletic activities which have kept them out in the fresh air and sunlight and given them new health and endurance in the years since the World War. Hampering garments also would make women less agile in dodging the present-day swiftly moving vehicles, and might prove an added accident hazard to the great numbers of women now engaged in industrial operations.

Some leaders of the medical profession believe that with woman's lately-acquired physical freedom has come a greater freedom of mind and spirit. The modern woman will perhaps refuse to be a "slave to fashion" and will insist on the dress styles in which she has found greatest comfort, freedom of movement, and, perhaps, greatest health.

WHOOPIING COUGH STILL A DANGEROUS DISEASE

Whooping cough still ranks as a deadly disease, in spite of efforts to check it. The general belief that it is merely an annoying but necessary evil of childhood is all wrong. Scientists and public health officials are warning mothers not to take it lightly and to be ready to guard their children against the usual spring and summer outbreaks.

"No other common infectious disease of childhood takes so large a toll of life among children under two years of age," said Dr. Matthias Nicoll, jr., New York State Commissioner of Health. Whooping cough is dangerous in itself and also because it is frequently followed by pneumonia and tuberculosis.

Various vaccines and sera for preventing the disease have been developed. None of them has been entirely satisfactory, although some physicians have reported success with them. One of these which does not entirely prevent the disease, does reduce its severity and the fatalities resulting from it, and is recommended by health officials. The best prevention still consists in keeping children away from those who have whooping cough. This is difficult because the characteristic whoop does not develop until a week or more after onset of the disease. Consequently one must keep the children away from those who have colds or coughs, to be safe. Reduction of whooping cough has lagged far behind reduction of other communicable diseases chiefly because of the popular attitude that it is not a serious disease.

"Deaths from whooping cough occur just as often as they did 25 or 30 years ago," stated Dr. Nicoll.

The cause of whooping cough is generally accepted as being the Bordet-Gengou bacillus, named for the two Frenchmen who isolated it in 1906. It has been the basis of most of the attempts to produce an antitoxin or preventive vaccine.

Ultraviolet and X-rays, alkalis, blood serum and even ether have been used more or less successfully in the effort to find a cure or preventive of the disease.—Science Service.

STUDY OF EARLY AMERICAN MEDICAL HISTORY ADVISED

The first duty of the newly founded Department of the History of Medicine of Johns Hopkins University, Baltimore, will be to investigate the early medical history of our own continent, if the advice given at the dedication ceremonies by Prof. Karl Sudhoff of the University of Leipzig is followed.

Prof. Sudhoff is the greatest medical historian of our age, possibly of any age, and the high esteem in which he is held by Dr. William H. Welch, who will direct the new department, makes it likely that his advice will be followed.

The study of early American medicine will go back to the Incas, Mayas and Aztecs, whose ruined cities are now being investigated by archaeologists. All American and South American medicine, both ancient and modern, is an especially appropriate field for investigation by the new department, but this department's field is really world-wide, Prof. Sudhoff declared.

"A physician who knows only medicine, does not even know medicine," Prof. Sudhoff quoted, explaining that without historic perception the physician lapses into a mechanic. He also emphasized that an important phase of medico-historic investigation is its unifying function with reference to the basic disciplines and the many specialties of scientific medicine.

Dr. Welch himself, who is now professor of the history of medicine, believes that a study of medical history by periods is desirable. Also, he said that a knowledge of actual medicine, such as may be gained from actual practice, is of utmost importance before an attempt is made to write medical history. He attributed much of Prof. Sudhoff's own success as historian to the fact that he was a physician before he became historian.

Because of the "tumultuous" state of American universities today, the new department of history of medicine is particularly significant, Dr. Abraham Flexner of the General Education Board, pointed out. With the increased facilities of our universities has come simultaneously an increased cheapness and mechanization which is to be deplored. The new department or institute will lead a return to more cultural aspects of education, particularly along scientific and medical lines, where the emphasis now seems to be almost exclusively technical.—Science Service.

PUBLIC AND PRIVATE MEDICINE SEEK ROAD TO RECONCILIATION

The dread ogre of physicians, socialized or state, medicine, was brought into the light, examined and shown not to be so fearful after all at the recent meeting of the Board of Counsel of the Milbank Memorial Fund. Practical steps for a solution of the great controversy of public health vs. private practice were presented by a physician, Dr. James Alexander Miller.

Dr. Miller advised his fellow physicians to acquire a broader outlook on public problems and to consider the matter of the public health as well as the curing of individual patients. At the same time, health departments and other health organizations were advised to enlist the aid of private physicians in putting over their health programs, rather than to spend public funds for work that rightfully should be done by the private physician for the people of his community.

The sympathetic individual touch that exists be-

tween doctor and patient is important and should be saved, Dr. Miller declared. Clinics and dispensaries, insurance companies and health departments cannot give this, although they can do much good work. However, from the ranks of practicing physicians are arising men who have not lost touch with individual, curative medicine but who have also interested themselves in prevention medicine. Such men, leaders in their profession, will become connecting links between the medical profession and the public and private health organizations, Dr. Miller prophesied.

"The growing knowledge of causation of diseases has forced preventive medicine into the foreground," said Dr. Theobald Smith. Research has become the fountain head of advances in both curative and preventive medicine, he pointed out in a discussion of how research has brought the practice of medicine and public health activities into closer relationship. While the conflict between the two wings of medicine is natural, both wings are really needed by the public, he said. The physician is the outpost for the public health officer, discovering new diseases and their cause and new means of treating and preventing them. Health demonstration programs may be considered as a kind of research experiment in themselves in proving how good our knowledge of disease prevention is.—Science Service.

SEX HORMONE ISOLATED BY GERMAN CHEMIST

The important sex hormone has just been obtained in pure form for the first time by a German scientist, Dr. M. Butenandt, working at the laboratory of a recent Nobel Prize winner, Professor Adolf Windaus, at the University of Goettingen, Germany. This hormone, which has been known to the medical profession for some years, is thought to be capable of restoring the functioning of the reproductive organs. Heretofore it has been obtained only in combination with other compounds, but Dr. Butenandt has been able to produce the hormone itself in pure form, as a crystalline substance which he has named progynon. The sexual hormone is one of a number of curious and as yet little understood substances which are secreted by the ductless glands of the human body. Each of these special chemicals is responsible for the proper functioning of certain bodily activities, and physiological chemists believe that a systematic study of these secretions will lead not only to an understanding of the physical operations of the body, but even to an explanation of mental characteristics and that elusive property called "character."

The importance of obtaining a hormone in a pure state is that it is the first step toward the determination of its structure and its synthetic production in the laboratory. The action of the hormones within the body and their influence on other chemical processes of the body may be better understood after the structure of the hormones has been determined.

Progynon belongs chemically to the group of stearates, or fats, and it is related to the artificial vitamin, vigantol, discovered by Professor Windaus. This also puts it in the same class as the poison of toads and the bile acids. On the other hand, adrenalin, the hormone of the suprarenal glands, is related chemically to the plant drugs known as the alkaloids, of which morphine is a well-known example. Adrenalin was the first hormone isolated in a pure state, and it has since been produced synthetically.—Science Service.

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SYPHILIS OF THE UPPER AIR TRACT

JOHN F. BARNHILL, M. D.*

INDIANAPOLIS, IND.

I do not flatter myself on being able to carry any new message to you on this subject. I was led to choose it chiefly because at the moment of receiving your very gracious invitation to be one of your guests, I had just finished reviewing some of my experiences in diagnosing and treating syphilis over a rather long period, and fancied I might have unearthed a few items of interest.

In the first place I was impressed by the comparative ease with which lues of the upper air tract usually may be diagnosed. I say usually, for diagnosis was not by any means always readily made, and the exact nature of the affection of the region was often in doubt, even after my conferees were consulted and all available laboratory methods of assistance had been employed. Then too, there were not a few instances in which diagnosis was long delayed or was even impossible to make for the reason that all history was negative and the physical appearance of the disease closely resembled other affections. These cases occurred chiefly before the Wassermann reaction was known and the spirocheta pallida had been discovered. Again, while the results of treatment were usually satisfactory, indeed often quite amazing in

their good effects, cases were not wholly wanting in which benefits were not received, and the patient rapidly drifted to disaster. These and other facts relating to the disease, I felt might justify opening a time worn subject anew, especially if it partook somewhat of the element of personal experience.

Much research has been given to the history of syphilis and many important facts have been uncovered. Among these is the belief that lues did not exist prior to the fourteenth century. Some investigators think they have proven that the disease originated in America and was first introduced into Europe by sailors who accompanied Columbus on his voyage of discovery in 1492. One of the most convincing

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proofs that the affection is a comparatively modern disease was established by Virchow who was unable to find evidence of syphilis in any human bones in the museums of Europe, although these contained the skeletons of many who died long before the discovery of America.

Although syphilis had received accurate clinical study prior to the present century, it has in the first decade of this latter period become better known than in all previous centuries. Briefly, Roux proved in 1903 that the affection was inoculable. In the same year Hoffman demonstrated the spirochete pallida. In 1906-7, Wassermann successfully employed the serum compliment fixation in diagnosis, and in 1909-10 Ehrlich discovered arsphenamine and employed it in the successful treatment of lues. Thus it is seen that in a few years the methods of diagnosis and treatment of the affection have been vastly improved. But even with the advances that have been made, there still remain cases in which diagnosis must be delayed and is even then uncertain, and in which treatment is unsatisfactory or fails altogether. Early diagnosis of syphilis of the upper air tract, as of other parts of the body, is undoubtedly of greatest importance, for treatment, once the nature of the affection is known with certainty, is now satisfactory in the majority of instances. There is no other disease in which early diagnosis is of greater value. Delay in determining the nature of the affection in the throat or nose especially is responsible for most of the disastrous consequences, including permanent, humiliating deformity, a wrecked nervous system, or death from intracranial extension.

To be adequately trained in laryngology undoubtedly requires that the practitioner shall have a good knowledge of general disease; to be satisfactorily prepared to cope with lues of the nose and throat demands that the laryngologist shall have exceptional knowledge of the behavior of syphilis from the inception of the primary lesion on throughout the whole subsequent life of the individual, for in the first place the lesions of all stages of syphilis are frequently found in the upper air tract, and in the second place, the nature of these manifestations may not be recognized at all unless the laryngologist is thoroughly familiar with the lesions that may be found in the same individual in other structures, even though in distant parts of the body.

The primary stage of the disease is of

least importance in laryngology because of its comparatively infrequent occurrence in the upper air tract. That it does occur in the vestibule of the nose and in the mouth and pharynx has been abundantly proved. Persons free of the disease who have occasion to handle syphilitic individuals, or utensils infected with luetic virus, may pick their noses subsequently and infect the septum or nasal vestibule. Numerous instances of primary chancre of the septum and vestibule due to this cause have been recorded. Zeisler has recently reported three cases of this type, all on the cartilagenous portion of the septum just inside the vestibule. These patients all had been seen and treated by laryngologists who had made a correct diagnosis in only one instance. One patient had attended a Chicago Eye and Ear infirmary where he had been treated for six weeks under the mistaken diagnosis of "ulcer in the nose, and sinus trouble." Another was treated by a "leading Chicago rhinologist" for "simple sore" of the nose. These mistaken diagnoses on the part of the rhinologists strongly suggest that this type of surgeon may be either ignorant of the appearance of primary syphilis in the region of his specialty, or that he is too often careless in properly recording his diagnosis.

Numerous instances of primary infection of the lips and mouth from kissing and biting are on record. Cole reports the case of a chancre on the lip of a baby resulting from the kiss of a luetic relative. Later the father was infected on his lips from kissing the baby. This father later infected the child's mother and the latter being six months pregnant gave birth to a syphilitic child. Thus four cases in one family resulted from an unwanted kiss of a meddlesome relative.

Cole further states that bites inflicted during caressing are especially likely to be followed by chancre of the lips. This same author indicts especially as contagion carriers dental instruments and kitchen utensils, and calls attention to his finding that out of 61 cases of extragenital chancre late positive diagnosis occurred in only 37, and expresses the opinion that this record is better than is usually found.

Infected utensils used in eating are undoubtedly, occasional infection carriers. Unnatural sexual practices are responsible for some instances of mouth and throat contamination. Only recently I have seen such a case in a woman of apparent culture and refinement. I have seen four instances of

chancre on the lips of young adults that were clearly traceable to kissing. I have also seen three cases of lues in children that were due to using infected utensils. One, a child of six years who had used the same pencil as a seat mate who suffered from secondary lesions of inherited syphilis of the mouth. This child had serious nasal symptoms that were designated catarrh by the physician who first saw her, and she rapidly developed an iritis from which she lost one eye, all apparently without the thought on the part of her medical advisor that the affection might be luetic, for he advised the parents to take her to a milder climate for the relief of her "catarrh". This child has now grown to womanhood and has developed, in addition to the eye and nasal affections narrated, and in spite of active treatment, an atrophic rhinitis and complete loss of hearing in both ears from labyrinthine involvement.

Numerous authorities have recorded the initial lesion of syphilis on the lips, or in the mouth or pharynx. L. Duncan Bulkley, writing on "Syphilis in the Innocent," states that of 9,058 cases of extragenital chancre 307 were found in the pharynx, chiefly on the tonsils. Szadek reported 200 instances in which hard chancre was located on the tonsils. Cheatham in 1903 states that he has seen seven cases of primary chancre in the throat during a period of one and one-half years.

Primary extragenital chancre occurs most frequently on the lips; next oftenest on the tongue, while only occasionally is the affection seen at the angle of the mouth and on the mucosa of the cheeks. Of 55 extragenital chancres seen by Porter, 31 were on the lips, 6 on the tongue, and one each respectively at the corner of the mouth and in the nasal vestibule. Twenty per cent of Bulkley's extragenital cases were on the lips, and in a later report of private experience the same author found 50 chancres on the lips out of a total of 113 cases.

It is probable therefore that primary chancre of the lips, mouth or throat is more common than supposed, and that often it may pass unrecognized as such by the laryngologist. If the true nature of such a sore be not determined, the chancre will here as elsewhere disappear spontaneously in due time and the patient be permitted to pass on to the ravages of other stages wholly untreated. The responsibility of the laryngologist to make a positive diagnosis is plain for it is not probable any

one else will have an opportunity soon, should the case be thus neglected.

Chancre of the lips or cheeks may be mistaken for simple canker and if on the tonsil, for ulcerative tonsillitis, malignancy or Vincent's angina. In most instances the history of the case, the appearance of the ulcer, the indurated rim and base and the intractability to ordinary means of treatment should lead to a suspicion of the true nature of the lesion, but there are undoubted instances in which even with all the modern laboratory assistance at command, the diagnosis may still remain in doubt. I have had personal experience with only one chancre of the throat. It was in a woman of forty, already in the cancer age, and since the patient would give no history, I was much puzzled until secondary lesions were evident.

Secondary syphilis of the nose perhaps seldom occurs in the acquired variety. In inherited lues it is common enough, the chief indications being mucoid discharges, snuffles and more or less impaired nasal breathing. This type in infants may be mistaken for a common cold, adenoids or even for enlarged thymus. The secondary manifestation is often found in the mouth and pharynx but very rarely in the larynx. Unless the observer considers every case of shallow ulceration and exudate in these regions a possible secondary lesion, he will undoubtedly overlook many instances of syphilis. The mucous patch occurs in the mouth and pharynx coincident with the skin eruption, and other general secondary symptoms, and unless one is thoroughly familiar with these latter it is easy to overlook the true nature of the former, especially among private patients in whom the affection may be little suspected. The mucous patch may be seen on any part of the mouth but most often on the lips, around the molar teeth and upon the soft palate. The plaque often has an appearance closely resembling oral exudates seen in pneumococcic or streptococcic infection, diphtheria or Vincent's angina. There are usually enough differences in appearance to distinguish the secondary lesion of syphilis from the other affections, and yet I well recall many instances in which had I depended solely upon objective appearances in the mouth and throat, I would certainly have gone widely astray in diagnosis. In such cases repeated examination and laboratory assistance are necessary and snap diagnosis is reprehensible. Valuable as one's clinical experience is, there are cases in which if experience is depended upon

solely, serious error is certain to follow. I have had many cases in which subsequent study and laboratory examinations have completely changed my first impressions of oral lesions which seemed on casual inspection to be luetic, and vice versa.

Throughout an experience covering more than a quarter century I have marveled at the fact that so few innocent people become infected from more or less close contact with those having active secondary lesions in the mouth. Close companions, one luetic, others not, waiters in hotels, servants in families have been under observation for considerable periods in which no innocent victims became infected. It is true of course that in all such instances rigid instructions were given concerning avoidance of transmitting the disease. Comparative immunity of the innocent no doubt depends more on the short life of the spirochete outside the body than upon any scrupulous care on the part of those infected. Dental and surgical instruments that are used on one patient after another after short intervals are undoubtedly a menace. Sterilizing outfits are now a part of almost every office, and risk is at present minimized, but the period is not remote when many dental or other surgeons only rarely, if ever, actually boiled their instruments between patients. In this connection, I recall a personal experience and perhaps narrow escape I myself had from luetic infection from dental instruments. I had for some days been treating a young man who suffered from extensive, virulent secondary lesions of the mouth. During the same period, I had an engagement with a leading dentist to have a crown placed. When I passed into the dental operating room my patient with secondary mouth lesions passed out. On noting that the dentist did nothing more than rinse the instruments he had been using on the luetic patient, and which he evidently proposed to employ in treating me, I asked him if he had seen anything unusual about the previous patient's mouth. He replied that he had not. I then related my knowledge of the infectious state of the young man's oral cavity and insisted on boiling all instruments, which was done. About three months later I discovered mucous patches on the mucosa of the cheeks and gums of a young lady whom I knew had been a patient of this same dentist on the day before my experience. The circumstances were such that it was evident direct transmission of the disease from dental instruments to an innocent patient

had taken place. This was many years ago and I am now certain that any such occurrence must be exceedingly rare, if it ever happens.

The period during which skin eruption occurs and mucous patches appear in the mouth and throat provides another feature of paramount interest to the otolaryngologist, for it is early in the secondary stage of the luetic affection that the nervous system is most often affected. One of the vulnerable parts in this system appears to be the acoustic nerve and hence the examiner on finding evidence of secondary syphilis in the throat at once thinks of the possibility of subsequent labyrinthine disease and deafness, or at once accuses the lues he finds present as the cause of any sudden deafness that may recently have taken place, and begins treatment at a period most serviceable to the patient.

I have seen instances of tertiary syphilis of the nose and throat much oftener than primary or secondary lesions. Gumma, the most characteristic pathology of this stage, may attack any structure of the nose, pharynx or larynx. The fact that the gumma may appear at any period of years after the patient has seemed to be cured of his lues, and when apparently in perfect health, may throw the examiner off the scent in diagnosis, especially if no history of primary lesion is obtainable and the patient has been entirely well for many years. Such a gummatous tumor may appear in young adult life; in those far past middle age, or at any period between. There is nothing wholly characteristic of its method of coming, or in all cases of its physical appearance when once established. Such a tumor appearing in the upper air tract at the cancer age may give rise to grave apprehension of malignancy, especially if the patient be anaemic, worn and cachectic, as he often is. Or there may be strong reasons for believing the gummatous tumor may be tubercular, and the patient may look the part. In early adult life sacroma may be strongly simulated. Occasionally the similarity of the tertiary syphilis of the nose or throat to one or the other of the above named diseases is so close that both experience and laboratory aid combined are not sufficient to a positive diagnosis. In such cases development must be awaited, but the progress closely watched and the patient treated meanwhile as though the affection be syphilis, for should it be that disease, and treatment is neglected, horrible, irreparable destruc-

tion and deformity might take place while procrastination were indulged in. It may in the end be found that the affection under observation is either cancer or syphilis, and sometimes the complete evidence on which diagnosis is based will clearly indicate that both these affections are present even though the tumor may be distinctly one or the other. I find numerous instances in my own experience in which there was a persistent, positive Wassermann reaction and a well established history of lues, but in which active antiluetic treatment was wholly ineffective and the patient continued rapidly on to death from cancer. These are instances in which both affections were present, but the cancer was more active than the lues.

It is unnecessary to dwell on the ravages of gumma in the nose and throat, or on the shocking deformities that follow the repair of the destroyed tissues, for all this is but a familiar part of your work. The thing I would most wish to do, the one thing every otolaryngologist would most wish to accomplish, is to prevent every such unfortunate outcome, and this we must realize can best be done by early diagnosis and early, rational treatment. A safe rule to follow in this respect is to regard all suspicious lesions of the upper air tract as luetic until they are proven otherwise by extended observation and laboratory tests, now fortunately available in almost every community. No time should be wasted in making a diagnosis and no opportunity should be lost to prevent breaking down and permanent deformity of healthy parts by instituting active antiluetic treatment while awaiting a conclusion as to the nature of the disease. Such treatment does no harm and may be the means of preserving intact tissues that would otherwise rapidly break down, and as a consequence leave irreparable destruction and deformity in its wake.

Treatment of any stage of syphilis is so well known to bodies such as this, that I shall waste no time on particulars concerning modes and medicaments. My own feeling concerning the results obtained in private practice, even before the introduction of arsphenamine, is that when early opportunity has been given and early diagnosis was made, anti-syphilitic medication has yielded greater satisfaction than ever was obtained from treatment by drugs of any other bodily ailment. The rule has been that when the case has been diligently followed by medication and watchfulness through a sufficient period

that almost uniformly good results have followed. In the tertiary stage, even when gumma of the nose or throat was already advanced to the point of breaking down, it has been my happy good fortune to prevent disaster in almost every instance. My absolute faith in mercury and potassium iodide, born of satisfactory and often even brilliant results before the day of neosalvarsan, has led me to continue their use, not to the exclusion of the newer remedies, but always in the belief that their value is now scarcely surpassed.

I have in the period of my practice found a few cases of intractable lues in whom no type of medication given in any quantity seemed to check the disease in the least. I recall one, a married woman of 25 and of good family, who had contracted the disease from her husband, who when I first saw her, suffered from a disintegrating gumma of the pharynx. Despite all that could be done, the ulceration continued unchecked until invasion of the internal carotid occurred and sudden death from hemorrhage followed. I have witnessed a few other unchecked cases, chiefly those attacking osseous structure of the face or skull.

One further observation I have frequently made which is of some importance, I believe in the management of lues is that the patient is often overtreated. This usually occurs in response to the anxiety of all concerned to eradicate the disease at once. It is wholly doubtful if overtreatment ever helps, and it is entirely certain that excessive medication often puts the patient into a physical state far worse than the lues. The cellular elements of the blood are damaged and its chemistry changed. The stomach and intestinal tract are often so much damaged that nutrition is interfered with to a serious extent; and lastly the kidneys and other vital organs are not infrequently so hopelessly crippled that the luetic patient dies, not from syphilis but from the effects of too much medication. In the treatment of lues, if one would be successful, the patient himself must be taken constantly into account. Balanced diet, outdoor life, freedom from worries, and in general proper hygienic measures, seem in many instances almost as essential to the cure as are the best chosen antisiphilitic remedies.

DISCUSSION

Dr. Robert H. Fraser, (Battle Creek): Out of his large experience and that of the authorities he quotes, Dr. Barnhill has given us the great privilege to hear this subject in a very new way, and

anything I might add would be superfluous. I shall merely show you a little of my temerity and my audacity as relating to differential diagnosis of these cases. I have to study them carefully. Before there was so much in the literature about tests and treatment we were given more accurate descriptions of the lesions, so that we could tell what we were dealing with. Usually from the history we have the idea that there are two or three things only to be considered. Syphilitic lesions in this field, however, are so diverse as to require unusual diagnostic care. The average practice contributes less experience in them than was formerly the case. It is false economy to spare effort in differential diagnosis. We try to limit the possibilities to three at the outside, exclude one of these on the history, and pit the two remaining, for example, lues and tuberculosis, against one another by every possible relevant means, seeking, however, the least radical measure first. These include examination of the chest with roentgenograms, serological tests, examination of lesions by the syphilologist, antiluetic treatment—usually .45 gm. neosalvarsan. The estimates of the two consultants mentioned upon the general constitutional impression of the case, and of the color and other appearances of the lesions, form valuable aid. Incision for tissue is postponed as the last measure. The element of luck will always be added to or subtracted from any management, as the following case of tonsillar lesion well shows: Mrs. E. H., age 69, came to us April 16, 1922, complaining of a sore left tonsil of four months duration. The following letter from her home physician indicates the element of luck: "July 22, 1922. Mrs. E. H. of this place states that she was under your care some time ago for a certain peculiar—to me—ulcer of the throat. I had her case at first and although her Wassermann was negative, I treated her anti-syphilitically. However, she did not respond as soon as I wished, so I recommended that she go to one of the larger clinics to see a specialist. At this clinic they pronounced it cancer. But she was in my office today for paralysis of the extrinsic muscles of the left eye and her throat is O. K. I am happily surprised at her cure and am anxious to know the diagnosis and treatment of your department. If you will kindly inform me I shall be very grateful." Neosalvarsan, .45 gm. was given by us pending receipt of a Wassermann report, which, by the way, was negative.

Dr. E. J. Bernstein, (Detroit): Whenever Dr. Barnhill is on the program, everyone rather expects to hear something well worth listening to, and I doubt if we have been disappointed this afternoon, and there are many of us who are in a position to profit very much by this excellent paper. I remember a number of years ago when I was connected with a large hospital in Baltimore, we used to see the most terrific ravages of syphilis—whole pharynges gone; most appalling things. I do not see them any more. I am wondering if this is due to the fact that I have not a large clinical experience any more or whether syphilis is not devastating to the extent it formerly did, or whether it is owing to the fact that more men are alive and alert, and becoming more alert, to the early symptoms and the proper way of treating this disease when in the early stages, so that we do not see these frightful advanced cases any more. I do think that doctors are more on the lookout for it, and certainly people are better educated concerning it.

Just one point about the ancient story of

Columbus and syphilis. I feel that this is a myth. I remember reading a few years ago a very excellent article concerning this story, and in that article it said that syphilis was known in very ancient days in the east, in China and other parts of Asia, many years before the Christian era. In treating syphilis, and in fact in diseases of any kind where there is any doubt about what is going on, I always bear in mind the teaching of a professor of surgery when I was a student who said,—"First of all, if you know syphilis and how to treat it, you will be a good doctor and make a success; and if you have any doubt, suspect your own grandmother." I think this is a very wise maxim. I want to mention also the primary chancre of the mouth. I have not seen many, but a number of German writers, Hermann Schmidt among them, speak of them and say they are not always due to perverted sexual function. It is rather cruel to accuse every individual who has chancre of the tonsil or mouth of having indulged in perverted sexual intercourse. They are more frequently innocent than otherwise.

When we had to rely on clinical experience I think we were pretty alert in looking for symptoms, especially those of us who bore the old maxims in mind, and I think the younger men as well as the laboratories today are entirely too prone to rely upon the laboratory tests. I want to call attention to the fallacy of relying upon laboratory tests by referring to a report sent out by the Massachusetts General Hospital several years ago. The pathologist of the hospital made sections of some 500 cases in which there had been more or less suspected syphilis. In a large number, something like 35 per cent, in which the Wassermann had been negative, microscopic examination showed 60 per cent of that 35 per cent to have had ample evidence of syphilitic infection; on the other hand, in a large proportion of the percentage which had showed positive Wassermanns, careful microscopic examination failed to disclose any evidence of syphilis. I think, therefore, that while we should of course take the serological tests into consideration, we must not rely too greatly upon them and must combine them with our clinical evidence. I do not want to go too deeply into this, but two or three things have struck me. I suppose we all remember the theory that leukoplakia in the mouth was supposed to be due to syphilis and that it was considered to be a forerunner of cancer of the mouth. Just yesterday a man came into my office whose mother I treated about thirty-five years ago, who had a most frightful leukoplakia. She was a widow, not a smoker, and not syphilitic. She is now alive and well at 84 years of age. A great many men of the earlier school used to think that syphilis was a possible underlying cause of sarcoma, and I should not be surprised if a great deal of cancer of the lip attributed to smoking was not due to previous attacks of syphilis of the mouth. I rather doubt that where ten or fifteen million in the United States smoke, and a few hundred get cancer of the mouth, that this can be the cause; I think it must be attributed to some other causes. As to the incidence of gumma or syphilis of the upper respiratory tract in the presence of tuberculosis—how rapidly one may overlook syphilis when there is evidence of tuberculosis!

Dr. Robert Sonnenschein, (Chicago): I cannot add anything of material interest to this paper. I have been put on the defensive because I come from Chicago. I read Dr. Zeisler's article, and I may say that I was neither doctor

nor patient in any of the cases which were cited. One will frequently see an inner swelling of the mucosa covering the turbinates, which does not shrink when cocaine is applied. The mucosa is reddened and thickened. Many of these cases areluetis.

So far as the story about the introduction of syphilis into Europe is concerned, it has been shown that among American Indians there was no syphilis, but it was assumed that it came from Haiti. Moody showed that it was not present in ancient Egypt—they had many diseases, but not syphilis. Whether it originated in China I do not know, but shortly after Columbus returned to Europe a tremendous epidemic broke out in Spain. Of course we know if a disease has been present for a long time a certain immunity is developed, whereas on its first appearance it acts as an epidemic, as witness the case of the South Sea Islands which were swept with measles.

One thing I notice in lues of the auditory nerve, which is an important thing to remember. In early syphilis bone conduction is markedly diminished, while air conduction is still very good. I

had one case of a young man 19 years of age, with noluetichistory, who heard a whispered voice with the opposite ear closed, at twenty feet. That was a case of auditory nerve lesion with deafness. Another thing, in giving treatment, be sure to give mercury before arsenic. If you don't, you are liable to have a reaction and the hearing will be made worse. Give a full course of mercury first before you give the arsenate preparations.

Dr. John F. Barnhill, (Indianapolis), (closing): I feel that what Dr. Fraser said, that syphilis is less often seen nowadays in its worst stages, is true. I also feel that this makes it much more important for us to be on our guard. The things we see all the time we are on the watch for, and we must keep the other things in mind. Of course the story of where syphilis originated is unimportant. It is here, and it has to be taken care of. It occurred to me that the demonstration made by Virchow was a most remarkable thing, as he examined bones from all parts of the world and did not find any evidence of syphilis in ancient times.

FACTORS OF SAFETY IN OPERATIONS FOR HYPERTHYROIDISM*

C. D. BROOKS, M. D.**

DETROIT

Of first importance is an early diagnosis in hyperthyroidism, if we wish to save a patient economic loss of time, and later degenerative changes in the essential organs. The diagnosis of hyperthyroidism is usually not difficult and often is very self evident upon the first examination. It is very important to rule out neuroses and pulmonary tuberculosis. A patient may have mild or marked hyperthyroidism accompanying either one or both of these conditions which would only be a secondary factor.

In addition to a carefully taken history we think that it is important to have X-ray studies made of the chest, as a part in the examination. This will avoid mistakes we have frequently seen in patients who have had thyroidectomy when they have well marked acute miliary tuberculosis.

While a basal metabolic rate is important as an aid in diagnosis we do not believe that it occupies the place of importance claimed for it by some clinicians, but it should be taken; if there is a question regarding the check-up with the clinical diagnosis. We advise its repetition every five days for at least three tests, but wish to emphasize the fact that the basal metabolic rate should not be depended upon at all to decide as to suitable time for operation, nor do we believe that it is of much value to discern the degree of hyperthyroidism in many cases. It is of great value as an aid in diagnosis in the case of recurrence of symptoms after partial thyroidectomy.

By early operation we will avoid changes, especially myocardial changes. If hyperthyroidism is allowed to remain it will often be accompanied by cardiac hypertrophy and other changes which are permanent.

TYPES FOR PURPOSES OF DISCUSSION

In our clinical work we divide cases of goiter with hyperthyroidism, into classes.

1. Primary hyperthyroidism (Exophthalmic type) (Graves disease).
2. Adenomatous goiter, with hyperthyroidism.

We believe a small classification of this kind to be of great value to the clinician and the family physician in making diagnosis of hyperthyroidism.

The reason we prefer the term primary hyperthyroidism instead of using either hyperplastic, Graves Disease or exophthalmic goiter is that we see a large number of cases of hyperthyroidism which definitely belong to Class 1, where the patient's symptoms of tachycardia, nervousness, tremor, and loss of weight precede

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** Dr. Brooks graduated from the Detroit College of Medicine and Surgery in 1905, specialized in general surgery; He is associate surgeon at Harper Hospital, teacher at The Detroit College of Medicine and Surgery, and a member of the American College of Surgeons.

any apparent enlargement of the gland and that exophthalmus occurs in these cases a number of weeks or even months later. If we waited for exophthalmus as one of the symptoms for diagnosis, the diagnosis would be late, while it is very important that it should be made early.

In the second type of adenomatous goiter with hyperthyroidism, there has been a pre-existing enlargement of one or both lobes of the thyroid for a definite period of time, months or years, before the patient noticed any of the symptoms of hyperthyroidism. We emphasize the great importance of suspecting a retrosternal adenoma in cases with marked hyperthyroidism where the enlargement cannot be noticed by the palpating hand. In the ordinary retrosternal goiter, adenomatous type, we believe it is well to have a carefully made stereoscopic X-ray plate as an aid in locating the position of the goiter and its extent in the thoracic cavity. We advise making a routine roentgenological examination of the aorta and heart in all cases of long standing adenomatous goiter with hyperthyroidism.

PRE-OPERATIVE TREATMENT

We wish to emphasize that the pre-operative treatment in most cases of hyperthyroidism should not be prolonged before advising operation. We are not discussing at this time the very mild cases of hyperthyroidism with a few clinical symptoms, with a very slightly increased basal metabolic rate, and patients in ordinarily good health, who may not need surgery, but good medical care. After well established diagnosis of hyperthyroidism we believe that rest is of more importance than any other single factor as a pre-operative measure, especially what we term malignant hyperthyroidism, where the clinical symptoms are confirmed by high basal metabolic rate with rapid loss of weight, extreme nervousness, with high pulse rate, inability to eat, sleep, and so forth. It is almost unbelievable what a period of ten days to two weeks of rest in bed will do. Many of these cases of the above type will have marked fibrillation, which will improve during this rest period, and when patients have judicious use of Lugols solution, which we give both in the primary and secondary types. We advise dosage of from 10 to 20 mms. every four hours in grape juice, digitalis is given to get the effect when indicated. Patients in very dangerous and serious condition can be brought to a satisfactory condition for

operation, usually in a period of from one to three weeks. The average length of time is about ten days. It is important in choosing the time of operation that it be performed when the patient is in a period of remission. We do not hesitate to operate on patients with fibrillation in well marked cases of hyperthyroidism, provided they have had a course of rest, Lugols solution and proper digitalization. We feel, however, that digitalis given for a long period of time in hyperthyroidism is a very dangerous agent, and we believe that the prognosis after a long course of digitalis is not as favorable as in those who have had no digitalis except for a few days preceding the operation. We prefer, when possible, when digitalis has been given, that it be discontinued three or four days before the operation. If necessary, it may be continued a day or two after the operation, very safely when indicated.

Surgeons see many cases of marked and long standing hyperthyroidism, when it would seem that these patients can never be brought into a good risk for operation. We have not hesitated to operate upon these patients after they have a good course of immediate pre-operative treatment. It is surprising how completely these patients will recover after thyroidec-tomy. The important factor to determine is the one of hyperthyroidism. We have not refused a single bad risk in four years, although a number of patients have died during the pre-operative stage.

OPERATION

The type of operation will depend, of course, upon the condition of the patient, and also upon the experience of the surgeon and his assistants with the skilled anesthetist as a vital factor.

Confidence must be established with the patient that he can safely survive the operation. Patients whose nervous condition does not permit them to eat and sleep well are not fit for any stage operation, but should have a longer period of rest and medical treatment. We advise that the cases with marked hyperthyroidism have their operations as early in the morning as is possible, so that the patient will not have to wait hours in expectancy. It may not be as much of a factor as we believe it to be, but we do feel that it is another factor of safety to have the serious thyroid operations boarded early in the morning. If during the operation, condition of the patient seems to be unsatisfactory it

may be best to stop the operation at any stage, and the operation should be so planned that this can be done. For years we have performed what we choose to call hemi-thyroidectomy, but when the patient's condition is satisfactory, as it usually is, we do both sides at one seance, and attempt to remove each lobe complete and ligate all the vessels, before we even examine the opposite side. The removal of the side which appears to be the easiest first is the best method of procedure, not to specify a certain side. We find it very satisfactory to operate in this way because the trachea is disturbed very little, whereas in goiter operations if the forceps on one side are left on, one of them might slip during the dissection of the opposite side, and forceps are mechanically in the way of the operation. We have not found it necessary to perform ligation as a preliminary operation in over three years.

ANESTHETIC

We realize that these operations can be performed with local anesthesia. However, we prefer to use gas analgesia with local in all cases of marked hyperthyroidism. In the retro-sternal types associated with high blood pressure we give then the smallest amount of gas-oxygen induction, and then nearly all the operation with local anesthesia. We think this form of anesthesia is a marked improvement over any kind for these cases. In recurrent cases having had one or two operations previously, we find the operation at times extremely difficult, and plans should be made to have skilled assistants and carefully picked instruments, including a tracheotomy tube, which we believe, if held in readiness, is seldom required, but if ready there will be fewer disasters.

The operating field must always be dry and forceps are not put on any tissue without due consideration of the danger of injury to the recurrent nerve and parathyroids. Forceps should be small and it is important that the exposure be ample.

We prefer to have patients in as nearly a sitting position as possible on a well padded table, so they may be as comfortable as possible, and it is quite important that this comfortable position, allowing them to breathe easily, be arranged before beginning any anesthetic.

POST-OPERATIVE TREATMENT

We believe that Lugols solution is of the same value immediately following the operation to prevent the post-operative

hyperthyroidism, as it is in getting the patient in good condition preceding the operation.

In all severe cases of hyperthyroidism it is our practice to give Lugols by hypodermoclysis, the amount of Lugols given ranging from 15 mms. to 60 mmc. given in 1,000 c.c.'s of saline. Of this we used about 100 c.c.'s an hour. The needles are inserted in the operating room, well in the pectoral muscles and not in the breasts; this is continued as long as it seems necessary. Usually about 2,000 c.c.'s of saline with Lugols is given. With patients who are very highly toxic, we continue the solution longer. In very nervous patients novocaine may be added to the saline, using one-half ounce of 1 per cent solution to each 1,000 c.c.'s of saline. We believe this to be safer than to depend upon rectal drip in these seriously ill patients. In addition to this we give large quantities of water. Ice water is especially desirable, also Lugols, 10 mms. to 15 mms. in grape juice every four hours by mouth. Lugols solution in the ordinary cases is reduced after two or three days, as a rule, to 5 mms. three times a day, depending upon the apparent need.

We make a practice of doing rather radical operations, that is, removal of nearly all of the diseased gland. Patients do not apparently need Lugols, excepting for a short period after the operation. As a rule, most patients have small doses of Lugols, usually not more than 5 mms. daily for a period of a month, and then ought to be under observation of their physician every two or three months for a period of two or three years. We believe most cases that can have the radical operation, that do not entirely recover from hyperthyroidism, are found to have enlarged nodules, and that an insufficient amount of thyroid tissue was removed at the primary operation. When the patients' symptoms of hyperthyroidism continue clinically with check up and basal metabolic rate, we continue larger doses of Lugols solution for a period of two or three months, and then advise a second operation unless they are symptom free. We find at times it will be necessary to give small doses of thyroid extract in patients who gain greatly in weight. When thyroid extract is given, patients should be under close observation.

Luminol grains, $\frac{1}{2}$ to 1 every four to six hours, is often used, and it seems to act especially well in cases of hyperthyroidism, with, as far as we know, no bad effects.

Morphine is freely used for the first 24 to 36 hours as necessary, with ice bags over the precordial and to the head.

In all cases seriously ill, with large adenomata which occupy a position bellow the clavicle, a small rubber tissue, as well as a gauze pack, is inserted for drainage, which is usually removed in from 24 to 36 hours.

It is highly desirable to use a drain in all cases of patients over fifty years old, with moderate hyperthyroidism, but do not feel that it is necessary to drain cases of moderate severity in younger patients.

Dressings are usually changed the day following the operation, as patients are made more comfortable. We have been surprised with the often miraculous improvement in patients in a few days after operation after having the neutralization with Lugols solution. It has been shown by many observers, also observed in our clinic, that there is a marked colloid change in the goiter, following the administration of Lugols solution, but we could hardly expect the formation of colloid to explain the rapid improvement in the very severe types, many delirious, with high temperature and vomiting, which improve so markedly after a large dose or two of Lugols solution. It would seem, therefore, that the Lugols solution neutralizes the thyroxin and gives us this important effect.

RECURRENCE

As stated above, we believe that a certain number of recurrences are due to the fact that not enough thyroid tissue was removed, and there seem to be cases who rapidly develop hyperthyroidism even after a course of Lugols and rest and a very radical operation. They make an apparently complete recovery, then in two or three months have a recurrence of the symptoms, usually a palpable nodule can be found. Formerly we left a larger piece of the upper pole than we do at the present time. We have come to believe that it is better to perform a very radical operation and leave very little of the upper pole and only a small piece of thyroid tissue in the posterior capsule and thereby avoid recurrences. There is strong evidence that the ligation or destruction of the sympathetic nerve fibres which run along the superior thyroid vessels have to do with the exophthalmus. In a case where we had performed a very radical operation for a severe exophthalmic goiter, the symptoms were all relieved, except that the exophthalmus became worse, and persisted until we performed a superior cervical

sympathectomy. When recurrences do occur, we believe that after a few weeks of medical treatment, usually about the same as that prior to operation, rest, carefully given Lugols solution, that if patients do not improve they ought to have a second operation, and the sooner this is performed the better.

Repeated metabolic tests should be made in these cases, as an aid in diagnosis.

We believe that by the careful use of all known methods of surgery applied to the sick cases of hyperthyroidism, that the mortality has been greatly lessened in the last ten years, and the morbidity has decreased also in a corresponding ratio. It seems to us that the main reason patients do not recover as well as they should following operations for hyperthyroidism is the fact that the disease was of too long standing before the operation was performed, and they had degenerative lesions of the essential organs. The best results will be obtained in early radical operations after an early diagnosis, and not too prolonged medical treatment.

RESUME OF LAST 100 CASES OF HYPERTHYROIDISM

Males	11
Females	89
Average age	40 years
Youngest	12 years
Oldest	75 years
Average days in hospital	
before operation	2
Shortest	1 day
Longest	14 days
Average days in hospital	
after operation	8
Shortest	4 days
Longest	57 days
Average Duration of Symptoms	2 yrs. 6 mos.
Adenoma with hyperthyroidism	63 cases
Primary exophthalmic goiter	37 cases
Recurrent	7 cases
T. B. of lungs	2 cases
Post-Operative Complications:—	
P. O. hemorrhage	1 case
P. P. tetany	1 case
Died	2 cases
Interthoracic goiter,	
1st day, cardiac	1 case
5th day, cardiac	1 case

DISCUSSION

Dr. Richard Smith (Grand Rapids): This is a subject of course that must interest every surgeon who has to do with these cases. If he expects to have results he must give a lot of time and pay a lot of attention to the preliminary study of his patient and in preparing him for operation. It is not like a fibroid case where you can make an estimate very quickly, usually. These cases must be studied individually and with great care.

Probably one great factor in safety with the patient today is that he is given a period of rest before operation, with Lugol's, and during that period the surgeon has a better chance to become acquainted with him.

It seems to me we must make an estimate of two factors in our patient: First, that of increased excitability, and, secondly, that of the heart condition. That is one of the minor factors, but they are the things I want to speak of.

Without going into the classification of goiters at all, as toxic goiters present themselves to us we recognize those patients with an immense amount of increased excitability, the heart condition not being so serious, or very slightly serious, and, on the other hand, those with very little increased excitability and with a heart condition which is of very vast importance.

In the handling of those with much increased excitability we have estimated the behavior of the patient by the rapidity of the heart and the metabolic rate. But there is also another factor that I want to speak of, and that is the matter of time that the disease has existed. We have found a greater difficulty in making a proper estimate in patients whose period of toxicity has been a short one than in those that have continued perhaps over a year, two years or more. They seem to have settled down into a certain amount of compensation or something. At any rate there is a certain amount of stability about it that enables us to make a much better estimate. Those who come in with a history of one or two months are apt to form a source of surprise. We have had at least one unfortunate outcome in apparently a very mild case. There is always that thing in every one of these cases, an element in this matter of response to operation which nobody seems to be able to exactly estimate and which leads to conservatism when it comes to the surgical work.

On the other hand, we have those with the marked heart symptoms in whom the excitability is very small. We are very apt to keep those patients in bed much longer than the ten days or two weeks which we ordinarily would employ. It is not unusual to have them in bed six weeks or even longer before the operation, and in such cases we do not start the Lugol's at once, but start the bed rest, perhaps with digitalis, which we have found of some value in just that type. Then toward the end we give the Lugol's and go on with the operation.

As regards the matter of operation, if I understood Dr. Brooks right, he said that he did not employ the partial removal of the gland any more, that is the removal of the whole gland in the vast majority of cases, at least. Our experience has been quite to the contrary. I think we do more of the partial removal of the gland and do the whole removal of the gland in two stages than we formerly did. I believe that is a matter of safety to the patient. We can take some very bad cases, remove one side, and with very little reaction, certainly nothing that would cause any great concern. You may lose that patient if you remove both sides. A little later on, four weeks or six weeks afterward, removal of the other side is made a mere detail. The patient is so much better, and it can be removed in almost a minor operation. I have been very much prone to follow this procedure all the time. To be sure, in the vast majority of such cases you can remove both sides. I believe every now and then you will save a patient that you would otherwise lose if you took out the whole gland.

We gave up ligation and used Lugol's, and I thought I was never going to employ it again, but I have found that here and there, there is just a situation in which ligation fits and is of great

use, so I do not think it should be entirely discarded. (Applause)

Dr. J. G. Manwaring (Flint): I was struck, while Dr. Brooks was reciting in his characteristic way his experiences with goiter, with the fact that things are so uniform with most surgeons so far as the treatment of these thyroid cases is concerned. It may differ as to classification, as to etiology, and so forth. It seems to me there is no particular field in surgery which has developed so rapidly. General surgeons have generally commenced operating goiters, we will say, in the last fifteen or twenty years, so they have become a large part of one's surgical practice. In that comparatively short time, especially in the last five years, they have come to do things pretty much alike. There is no particular difference of opinion in most of the proposition; there may be some minor points of difference.

It seems to me there is nothing to discuss in great part. Dr. Smith brought up the removal of only one part at a time. There are very few people that we have to turn down. The disease is a progressive one, but there are certain people who get pretty old, and that makes you hesitate. I have operated them as old as eighty years of age and had very good results. We do not expect to return them to normal but we can stay the process.

I had a patient before I came here that I had had under treatment for some time in the hospital. I told her I did not think she was a case suitable for operation. It is an old thyroid that is calcareous. She has a heart that does not respond; it is very irregular, and the case does not improve in any way, so I think it is not a case for operation. She is seventy-three. Outside of those particular cases, I think it is in the senile type that the one-sided operation is of great advantage. These folks do not stand operation. If they have sputum that gathers there that is going to bother them. You can operate those people in two stages with comparative safety.

I want to mention that I tell the people to whom you apply the therapeutic measure to go right on the same as they have been doing. I do not have them rest. If they improve markedly, I strongly expect there may be a toxic condition of the thyroid. I feel in those cases that there are other things that have been straightened out. I still feel, and I suppose many do, that in certain types of what the doctor calls the primary type, the thing is due to some nervous strain. There is a vicious circle started. The patient becomes anxious about something, and the thyroid responds too much to that fear or anxiety with an excessive secretion, possibly an abnormal secretion. This sensitizes them, makes them more emotional, more sensitive, so that their anxiety is more easily aroused, and they still stimulate their thyroid to greater secretions.

You can interrupt that vicious circle in a number of ways. As I once said and got in bad, you can dispose of the husband if you want to; that may remove the source of anxiety. Or you can take out the thyroid gland. But in these people who respond, it seems to me there has been a readjustment. It is a very lengthy and difficult process to try to find the causes of anxiety, sometimes, but they do stay well. When you see them months or years afterward, they are still well, and you feel very sure that they had a hyperthyroid condition. You may have simply interrupted that circle in that you have restored, for the time being, the thyroid secretion possibly to

normal. The cause of anxiety having been removed earlier, they become normal. (Applause)

Dr. Frederick Collar (Ann Arbor): I quite agree that there has been very little left to say on this subject. There are two points, however, that are old ones, and I do think they should be mentioned. The mortality in these cases will depend, I think, upon two factors. Technic has been largely standardized, as has been said, and of course any of you may have an operative death, and all of us will if we keep on doing cases long enough, but those have been largely obviated. The cases that we have fall into two groups. The difficult cases are, first, the adenomatous goiter that has been neglected. I think all of us will agree that when an adenoma is once formed, no form of treatment, X-ray, medicine, or anything short of surgery, will rid that patient of that adenoma. I have never seen an adenoma caused to disappear by any means short of surgery after the patient is twenty-five years of age. I find that a great many men who do not believe in operation, or if they do believe in operation believe it to be a very hazardous procedure, will say to this patient, a woman of thirty or thirty-five, apparently otherwise normal but with an adenoma, "Your basal metabolic rate is normal, therefore let this adenoma alone. Some time it may cause you a lot of trouble, but you are all right now, so let us wait until your heart is gone, let us wait until your basal metabolic rate is high, and then we will operate upon you." I think that prophylactic surgery will obviate all of these bad risks that have been talked about this morning. I think we should stand by the doctrine that all adenomas in people of thirty or I will put it even twenty-five or older should be removed on diagnosis. That will remove this group of bad risks that have been discussed this morning, and, as I quite agree with Dr. Brooks, most of the mortality occurs in this group. It is just the group Dr. Smith is talking about. That is the end picture.

The second group that we find hard to manage are the cases of exophthalmic goiter that have been badly treated by the over-use of iodine. I am glad that that point has been emphasized this morning. I think rest in bed is very impor-

tant for these people. I do not use the iodine until I plan to operate within seven or eight days. If I want to have them rest in bed for a month, I do not start the iodine, unless they are in crisis, of course. I think nothing will replace rest in bed. Iodine as used in the treatment of exophthalmic goiter is only a pre-operative and post-operative measure. The operation must be used in those cases that have become iodine-resistant because of the over-use of Lugols solution. I had a man a few days ago who had had forty-five drops of Lugols solution for four months. He had had his remissions and exacerbations, and the iodine does not touch him. Those two controllable points will remove most of the bad risks from the field of surgery.

One other point that has interested me very much in the last year especially is that if you will have basal metabolic rates done on many of your patients a year or two or three years afterward, you will find that a lot of them (this applies to both groups) are running a little under normal; their rate will be -15, -18, -20. Otherwise they are well, but they still have not that sense of well being, and, of course, the obvious treatment is thyroid. I do not believe anybody can tell the exact amount of thyroid to leave, which is the important thing. The amount that you remove is not important, but the amount you leave is important in any given case. All of us will have a certain small per cent, especially in the adenomas where you are bound to remove all of the adenomatous tissue, of cases such as I have described, and I think that per cent is larger than most of us appreciate. I beg all the patients on whom I do thyroidectomies to see me at intervals. I get basal metabolic rates, and it restores them to a more perfect normal (if there can be such a thing) by giving them a little thyroid extract.

Again, I want to express my appreciation of this very able paper. (Applause)

Dr. C.D. Brooks (Closing discussion): I have nothing to say except that I am very grateful to the Section and to those who have discussed the paper.

ELECTROSURGERY GREAT BOON IN TREATING CANCER

That new and novel adjunct to the surgeon's knife, electrosurgery, finds its greatest usefulness in the treatment of cancer, Dr. Howard A. Kelly, emeritus professor of gynecology and obstetrics in the Johns Hopkins University, told members of the Southern Surgical Association at their meeting at Atlanta, Georgia. "The most important field for this novel agent lies in the realm of malignant growths and the various tumors," Dr. Kelly said.

This new method is not to be mistaken for merely a more convenient form of cautery, but is a specialty which must be learned with painstaking care, Dr. Kelly emphasized. He urged that the new procedure be given more attention in the big hospitals of the country, and that the younger generation of surgeons be given opportunities to test it out.

One very important advantage of electrosurgery is that it controls hemorrhage easily without the need of tying off each vein and artery, which must be done at each step of other surgical operations.

"In deep operations by older methods the surgeon often loses precious minutes in his efforts to check a severe hemorrhage and feels as well

estopped from going further in that direction," explained Dr. Kelly. With electrosurgery the lymphatics and smaller blood vessels are sealed with the progress of the operation.

"It sterilizes the parts attacked, destroying all bacteria and septic tissues as well as the malignant cells to which the growth owes its specific character and continuance," said Dr. Kelly in outlining the advantages of the method. "There is further no handling and squeezing of the tissues, a great boon in any aggressive treatment of malignancy, avoiding the further distribution of the cells.

"One might also well call it a knife and fork operation as the handling of the parts is limited to the slight sterilizing touch of the simple instruments used, avoiding even the gloved fingers of the surgeon.

"An immense advantage lies in the greatly enhanced facility in operating in areas awkward or difficult of access as in the nose and throat."

Dr. Kelly described the method in some detail and added that it is even valuable, in some types of cases, when radium cannot be used any longer. —Science Service.

COMMUNITY HOSPITALS

SOME PROBLEMS WORTHY OF CONSIDERATION IN THEIR ORGANIZATION AND MANAGEMENT*

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We have been particularly impressed with the fact that many hospitals of the community type of from twenty-five to seventy-five bed capacity, have been apparently organized and started in operation without first securing information which would seem to be essential to a proper consideration of the many problems involved. In this article we hope to present some of the information which we believe to be useful and which should be given consideration in formulating the by-laws, rules and regulations of a newly organized hospital that efficient service and good results may be assured to patients.

Hospitals, located in the smaller cities and serving the surrounding communities, have many problems peculiar to themselves, and the solution of the problem of giving efficient care to the sick has certain difficulties not encountered, or at least not to the same degree, by hospitals in large cities. A considerable amount of the major work of the community hospital is being done by physicians and surgeons engaged in general practice where they are compelled at times to come into intimate contact with both infectious and contagious disease. Many of them have had little special training to prepare them to do such important work with a reasonable degree of safety and to meet the problem of guarding their patients from the various dangers incident to disease and treatment. The greatest of these dangers is infection, so easily spread, when attention is not given to the many details necessary for its prevention.

The practice of competitive medicine instead of co-operative medicine is another problem worthy of consideration. Lack of efficient organization is oftentimes a fundamental cause of unsatisfactory service and results.

We realize that in many small hospitals, where the average results are not first class, individual surgeons and physicians were and are doing good work and securing the best results. This is largely brought about by good training in the specialties practiced, a full comprehension of the problems involved, and high personal

and professional standards on the part of these individuals.

We have for many years been interested in the problem of efficient hospital service for patients, especially in the smaller cities, as we practise in one. We have, whenever possible, visited hospitals so situated and made such investigation as opportunity permitted as to this problem.

We became still more interested in this subject when requested, about two years ago, to assist on the Committee on Organization of the Clinton Memorial Hospital located in St. Johns, Michigan, a city of about four thousand population. This is a fifty-two bed hospital which was erected, dedicated, and opened for patients in 1927.

After carefully studying the helpful literature received from the Director of Hospital Activities of the American College of Surgeons and from the National Hospital Association, the fundamental plans of organization and the by-laws were formulated and after being submitted to the Director and receiving approval, were adopted by the Board of Trustees.

In preparing the rules and regulations to harmonize with the Minimum Standard of the American College of Surgeons and the by-laws already adopted, we found it necessary to make a further study of the details of hospital administration. In this we gave special attention to the scientific and medical services offered by hospitals to patients and doctors.

We obtained interesting information as to these problems from: (1) Our study of the literature along this line; (2) an analysis of our own experience of over thirty years in surgery and obstetrics, the last fifteen being in St. Johns Hospital—a private institution devoted exclusively to surgery and obstetrics—where we treated over four thousand patients surgically. Here we had an opportunity to study

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each case, making a complete investigation of every complication, also every death as to cause and prevention; (3) data secured from hospital and government reports; (4) personal interviews with members of staffs and other interested persons; (5) reading articles and hearing discussions along this line.

As patients expect and should receive better results from treatment in hospitals than in homes, it seems to us that there are five important problems in results that deserve primary consideration. (a) Percentage of surgical mortality; (b) percentage of medical mortality; (c) percentage of maternal deaths; (d) percentage of post-operative infections; (e) number of days of average hospital stay.

In efficiently organized hospitals this is believed to be, in the present state of scientific knowledge. (1) One per cent or less of surgical mortality; (2) five per cent or less of medical mortality; (3) one-half of one per cent or less of maternal mortality; (4) one per cent or less of post-operative infections; (5) twelve days of average hospital stay.

An attempt to solve these problems in the interest of patients so far as they can be solved by rules and regulations, opened up an interesting field of investigation. We found that the majority of hospital reports gave but little information as to these five important points. We, therefore, have reviewed carefully our own records for the past fifteen years and have used these findings, at least in part, as a basis in our effort to formulate such rules and regulations as would assure efficient care and results for patients in our new hospital.

Our mortality in slightly over four thousand surgical operations was one and seventeen hundredths per cent, or forty-seven. The percentages of this number as to causes were as follows: Twenty-five per cent were due to pre-operative infection; seventeen per cent were due to post-operative infection; fifteen per cent to shock or vaso-motor failure; four per cent to pneumonia; four per cent to eclampsia; two per cent to hemorrhage distant from site of operation; two per cent to acidosis; eleven per cent to cardio-vascular diseases which were terminal conditions; nine per cent to inoperable conditions (malignancy); six per cent to toxemia from delayed operation in acute intestinal obstruction; four per cent to fatal injury. Undoubtedly some of these classed under other causes might have had infection as a complication. It is our opinion that at least twenty-

five per cent or more of our mortality was due to preventable causes.

As our hospital obstetric cases were too few in number, being less than five hundred with a mortality of two—both from eclampsia, dying within six hours of admission—we could draw no conclusions from them. We have, therefore, taken the U. S. Government Reports on maternal mortality as the basis of our study of this problem. In 1921 there were over fifteen thousand deaths from puerperal causes in the United States. Approximately forty per cent were caused by septicemia; twenty-six per cent by albuminuria and convulsions; ten per cent by puerperal hemorrhage; ten per cent by other accidents of labor, such as Cesarean section or instrumental deliveries, and fourteen per cent by all other causes. In 1925 there were twenty thousand mothers lost from approximately the same percentage of causes. There were seven mothers died to every one thousand births. In Michigan there was during 1925 one mother lost to every one hundred fifty-seven children born. A careful study of hospital reports and other statistics led us to the conclusion that approximately one mother is lost to every ninety children born in homes and one to every one hundred eighty-five born in hospitals.

Infection seems to be the cause of the largest percentage of mortality in both surgery and obstetrics. Infection does not occur under modern conditions without a cause and too often results in death; therefore, both the causes and results of this complication become matters of considerable interest in relation to hospital organization.

A review of our own experience and investigation along this line led us to the conclusion that the following are the most important causes of infection in clean surgical and obstetrical cases: (1) Improperly prepared ligatures; (2) inefficient sterilization of dressings, gowns, etc.; (3) failure to properly prepare the patient; (4) careless and inefficient scrubbing and sterilization on the part of the surgeon and his assistants, including nurses; (5) failure to maintain strict asepsis, such as touching unsterile articles; (6) carrying infection to patients although wearing sterile gowns, gloves, cap and mask, when those in attendance have lately come in close contact with dangerously infectious diseases or have handled minor infections without due precautions; (7) allowing people, including physicians, who have

been recently exposed to such diseases, to come into the operating and delivery department and by coming into contact with various articles, infect the rooms and their contents; (8) the spread of infection from patient to patient when necessary precautions are neglected; (9) infection in or on the person of those in attendance, such as infected throats, eruptions on the skin, etc.; (10) infection from the air, especially in the presence of lowered resistance or traumatism of the tissues; (11) infection in or on the body of the patient.

Infection from catgut ligatures may occur but many infections which have been laid to catgut are really often due, as Dr. De Lee remarked at a meeting of the Chicago Gynecological Society on April 21, 1922, to bacteria passing through the meshes of gowns, towels, or sheets when the clothing or table underneath is infected. We have found that infection may spread from patient to patient when precautions are not taken. Doctors and nurses who have sore throats, colds, or other infectious diseases should not attend surgical or obstetrical patients.

In our experience in surgery at the St. Johns Hospital up to 1918 when our rules as to attendance upon infectious and contagious diseases when engaged in surgery were less rigid, our post-operative infections varied from two to six per cent but during the next nine years when the ruling was that those attending such diseases were excluded from surgery, the average was less than one per cent. More careful preparation of patients, improvement in ligatures, more efficient sterilization with constant testing of sterilizers and in general improved asepsis, no doubt accounted for a part of the diminished infection but we believe that a considerable part of it was the result of the above mentioned rule.

The relationship of the percentage of infection to the mortality rate and the days of confinement in the hospital is of interest. In our experience we have found that over seventy-five per cent of surgical and obstetrical patients who became infected with streptococcus bacteria died and at least ten per cent of those who became infected with staphylococcus or colon bacillus died. Such patients, when no infection occurs, are confined to the hospital on an average of twelve days and when infection occurs, from fifteen to forty days.

We have found from experience that the following of the more frequent infectious diseases are particularly dangerous to surgical and obstetrical patients: (a) All

streptococcus infections such as erysipelas, septicemia, scarlet fever, puerperal fever, streptococcus sore throat, etc.; (b) gas bacillus; (c) tetanus bacillus; (d) diphtheria; (e) smallpox.

We cannot escape the conclusion that physicians and surgeons when attending these diseases should be prohibited by the rules of the hospital from attending surgical or obstetrical patients. All persons exposed to them, should be prohibited from going into the surgical and obstetrical departments.

The following infectious and contagious diseases are dangerous to surgical and obstetrical patients when precautions are not taken to prevent carrying them: (1) All staphylococcus infections such as boils, abscesses, carbuncles, felons, infected wounds, etc.; (2) colon bacillus; (3) Vincent's Angina; (4) tuberculosis; (5) pneumonia; (6) tonsillitis. Our conclusions are that if gown and gloves are worn while treating these diseases it is fairly safe to attend surgical and obstetrical patients, although it is much safer to delegate the treatment of such infections to those not working in surgery and obstetrics.

Experience has shown that attention to these matters has resulted in a considerable reduction in the number of post-operative and obstetrical infections. We believe, therefore, that these conclusions, based on experience, are worthy of careful consideration on the part of those engaged in hospital organization and operation. Dr. C. H. Mayo remarked at a staff meeting of the Mayo Clinic on September 28, 1927: "One subject constantly studied at this Clinic is infection, the cause of death in eighty-seven per cent of cases." While he referred no doubt to not only post-operative infections but also to those already present, to those in distant parts and chronic infections, still this remark by a thoughtful and distinguished man of vast experience, demonstrates the importance of the subject.

The problem of what can be done to decrease maternal mortality has been given much study and our conclusions, based on our experience in several thousand confinements, investigation of the experience of many others and all authorities at our command, are that in each thousand births: (1) Pelvic measurements of all primipara may save one mother; (2) prenatal care in other ways may save one more mother; (3) prevention of infection may save four more; (4) skillful obstet-

rical and nursing care may save two mothers, and but one to each thousand is lost from causes beyond human control.

To even approach this ideal result in communities with hospital facilities would require a vast amount of education of both the profession and the public. It would also require the solving of many social and economic problems, but the effort would be worth while even for partial results.

In investigating the causes of apparently mysterious outbreaks of infections in hospitals, many times no satisfactory explanation of its causes could be secured from official sources. However, from other sources, it was learned that doctors while doing surgery or attending confinement were at the same time in daily attendance upon such diseases as erysipelas without any evidence of precautions being taken to prevent carrying infection.

While we have for many years worn rubber gloves while engaged in surgery or obstetrics, we became convinced some years ago that gloves would not always protect from streptococcus and other like infections. Gloves may be torn or punctured and many thing may happen that allow contamination to take place. We believe as the late Dr. A. J. Oschner, of beloved memory taught, that it would be safer to operate with naked hands, thoroughly cleaned, that had not come in contact with infection, than with gloved hands that had been lately handling infections and were therefore probably infected although thoroughly washed.

For over twenty years we have made it a rule of our practice not to attend obstetrical patients when in attendance upon scarlet fever, erysipelas, and septicemia; and as a result—at least partly—of this rule our infections in obstetrics have been less than one-half of one per cent.

We have observed that in various hospitals where this rule is strictly observed, either because of the rules of the hospital or because of the personal belief of the staff members, the percentage of post-operative and obstetric infections was very small. We have also observed that in the type of institution under consideration, where this matter was ignored, the percentage of infections in such cases was much larger.

Our investigation has confirmed our previous opinion that surgeons and obstetricians should use the greatest possible care in handling infections; indeed, they should abstain as much as possible from coming into contact with them. Only

when this matter is given due consideration can the best results be expected.

We have not had an opportunity to investigate to any great extent the problem of medical mortality and other results in hospitals. We did observe, however, that wherever the results in surgery and obstetrics were good, the results in medicine were above the average.

In hospital organization and operation, if the best results are to be realized, there should be a subordination of personal consideration to the welfare of the sick and of all theoretical considerations, such as schools of treatment, to the application of scientific knowledge and medicine in the relief and cure of disease. It should be the aim of every hospital, however small the community in which it is situated, to secure the best possible results for patients at least in relation to the five aforementioned points.

Experience has shown that with few exceptions, the requirements by which this desirable result can be secured are: (1) That the equipment be maintained to the standard required by the committee on Hospital Activities; (2) that the Minimum Standard of the American College of Surgeons be adopted and strictly observed; (3) that the scientific and professional service of the hospital be directed and supervised by competent medical graduates; (4) that the major surgical specialties be restricted to those having a reasonable degree of post-graduate training and experience; (5) that there be such restrictions upon those engaged in surgery and obstetrics as to guard patients from the dangers of infection acquired in this manner.

Consideration should be given to each of these requirements, in the organization of a hospital, in formulating the by-laws to govern it and in making the rules and regulations to carry out in detail the by-laws. Consideration should also be given to all information that can be secured to the end that the interest of the patients be conserved to the highest possible degree.

Undoubtedly the largest single factor in the improvement of the results secured in hospital work during the past ten years has been the inspection and, whenever possible, the approval of hospitals by the Committee on Hospital Activities of the American College of Surgeons.

The adoption of the minimum standard and the effort to organize, equip, and work according to this standard has resulted in: (1) Better equipment; (2) the placing of

the scientific and professional service more generally under the supervision of medical graduates; (3) a better co-operation in the tracing out of the causes of poor results and the correction of conditions leading to failure; (4) a better application of the known facts of scientific medicine to the relief of suffering and the cure of disease, and generally better hospital service for patients.

Efficient organization is a fundamental necessity that satisfactory results for patients be assured. If the interests of patients are to receive first consideration, the practice of co-operative medicine should replace the practice of competitive medicine, at least in a hospital, that our ideal may be realized to a greater degree.

At the end of the first year we were pleased to find that in going over the records of Clinton Memorial Hospital there had been but one case of post-operative infection among the five hundred and ninety-three surgical patients. The average hospital stay in major surgical cases was approximately twelve days and there were no maternal deaths or serious complications.

Although our laboratories are not yet fully equipped and there have been some defects in management and service incident to new institutions, we feel a degree of satisfaction with the results so far. We hope for continued improvement in hospital service to the end that those trusting themselves to this institution may ever receive the best possible chance for relief and cure.

I am happy to be able to state that the utmost harmony has prevailed among the members of our staff. At the first meeting we adopted as a motto for the hospital and its staff the words of the late Sir William Osler who says that an ideal of his life has been to "act the Golden Rule so far as in me lay, toward my professional brethren and toward the patients committed to my care."

To our endeavor to live up to the spirit of this motto we attribute in a considerable degree, the harmony which has made our meetings a source of pleasure as well as profit to us all.

CONCLUSIONS

1. Preliminary to organization, a careful study of all information that can be secured should be made and the advice of experienced hospital authorities sought, that errors due to inexperience in operating a hospital may be avoided.

2. The interest of patients should receive first consideration in the organization and management of a hospital. There should be a subordination of all personal and other interests that harmony may prevail and patients be assured of first consideration.

3. By-laws, rules, and regulations should be formulated with a view of assuring, so far as such can be assured by organization, the lowest possible mortality and the shortest possible average days of hospital stay.

4. The best service can only be assured by an earnest effort on the part of the medical and nursing staffs, boards of control, and all others interested in living up to the principle of the Golden Rule.

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DISCUSSION

Dr. I. W. Greene (Owosso): I don't feel that the problems of a community hospital are exclusively those of surgery. I think our hospital in Owosso is perhaps one of the pioneers among community hospitals, and we feel rather proud of the institution. I feel that this question of community hospitals is extremely important and that it is one of the things which is going to help solve the problems of rural medicine. It is extremely difficult, as we all know, to get the young men to come out in the country to practice. They have put in six or seven or eight or ten years of training, and they are reluctant to go "out in the sticks," as they said last night, and practice without the facilities to which they have been trained. If they can get to a hospital within a reasonable number of miles, to which to take their patients and have them taken care of, they are much more inclined to do it.

I think the problems in the community hospital itself are quite different from those that we face in the larger city hospitals. In the first place, the majority of the men in the community have not been trained in hospital work; they are largely older men who perhaps graduated when the training was shorter. They don't take real kindly to all the routine and technique of a hospital, and it takes some training and some encouragement to bring them into line. Unless you can have the entire staff of the county or the city where this hospital is located working for you, your hospital is going to fail.

The first thing that you have to do is to get your doctors "hospital conscious," and you have to get your community "hospital conscious," too. When our hospital was built about eight years ago, the community was inclined to think it was ridiculous to put up a sixty-bed hospital, but we rapidly outgrew that, and we now have a 100-

bed hospital, with physical assets of about a half million dollars, and we are using all of them all the time.

These community hospitals, like others, are liable to become topheavy on the surgical side, and I think that is one error that they must not fall into. From my viewpoint as an internist, I am not entirely sure that this question of infection is the most serious problem that we have to deal with or is the entire cause of some of our unsatisfactory results. I feel to get good results you have to have good co-operation between your surgical side and your medical side and that your medical staff must be built up as well as your surgical staff.

In our hospital, it is almost a universal rule that all surgical patients will be seen by somebody on the medical staff, they will be given a physical examination, and all the heavy work, such as thyroid, stomach cases, prostate cases, and so on, will be turned over to the internists to be got ready for the operation, and when the internist says they are in suitable condition to be operated, then the surgeon goes ahead.

I think that hasty surgery in those cases is sometimes a very serious thing. Very often we pick up a patient with a cold, with a sore throat, with some tuberculosis, or something of that sort which would have given a very nasty result had the patient been operated, and it would not have been a credit to the surgeon.

The older men in the community, the men who are well trained in surgery or medicine, have got to make it part of their job to train younger men to take their places; they have got to insist that the younger men be trained before they do this work. We may not find in each community men who are capable of handling all the different specialties, but we must encourage other young men to come in who have been trained, or we must encourage the younger men of the community to go away and get sufficient training.

I enjoyed Dr. Hart's paper very much. He has a very fine institution over there, and it is a real credit to the community. I think in any place where you find a successful community hospital, you will find men like the Doctors Hart or someone who has a great deal of enthusiasm, willing to sacrifice themselves personally to put the matter across.

Dr. George C. Hafford (Albion): Dr. Hart has given us a lot of rules and axioms for small hospitals which apply equally well to large hospitals. The younger physicians don't realize the conditions that existed in the older days when we had to operate sometimes by kerosene lamp, on intussusception, or some other severe condition. I never go to the hospital without feeling thankful that I am able to practice with the present improved conditions.

After we get these hospitals, the next thing is to get the people educated to use the hospitals. That is coming. Nowadays a patient often asks me himself whether he wouldn't do better if he were in a hospital, and I am always glad to get a patient in that frame of mind. Dr. Hart must have done something along that line, because he took my next-door neighbor right away from me and took him fifty or sixty miles and operated on him.

Dr. J. G. Manwaring (Flint): I haven't anything particular to say. I suppose we have grown out of the community hospital size. Our hospital started with sixty beds and has over 300 at the present time. We have a staff of over

100 men. We did have some experience in community hospital work. In the smaller communities, it has been my observation that if the community hospital is successful, it is due to one man. There is always some inspired man who organizes and runs it. Co-operative institutions in the small places are not so successful. Many of them have started and failed. Many of them have been built around some one man and have failed after he has gone because there has been no one to carry on.

There is an economic side to this. I sometimes question the idea that the hospital is going to be the salvation of the rural communities. There is a great tendency for the patients to go elsewhere, out of their own community, for a great deal of their work. There is not enough left to support a community hospital in the way it should be supported. Lacking leadership to attract patients and keep them there, the community hospital is not so apt to thrive.

The community hospital serves a great purpose, and community hospitals will probably increase in numbers, but not, in my opinion, to the extent that is predicted by others, for the reason that I have given.

One of the great problems now is to find people who are executives, who can administer such an institution. One of the great problems in farming now is due to the fact that farmers cannot manage farms. When they were simple things run by rule of thumb, the boy did as his father did and it was not difficult, but now there are not enough good farmers to manage the farms. You can tell the good and the bad as you drive through the country. In our industries the same thing exists; they cannot find enough men for foremen with the intelligence and the ability to direct other men, to manage the shops. That applies also to physicians. There are not enough good executives to manage these hospitals everywhere, and that is the reason I say so many of these clinics that are formed gradually pass out.

There is more to the rural or community hospital than merely getting a hospital. If it is to be a success you have to get someone who can run it, and that, to my way of thinking, is the biggest problem in connection with it.

Dr. C. S. Gorsline (Battle Creek): It was my pleasure about a year ago to inspect this wonderful new hospital that they have at St. Johns. It is certainly a monument, not only to Dr. Hart and his brother, but to an inspired individual with means who lived there. I inspected this hospital in St. Johns with a view to getting ideas in regard to one which we are about to build in Battle Creek. I have made several trips to various parts of the country, as far west as Los Angeles, and have seen what they thought were models, but I want to tell you that for a hospital of its size I have yet to see one that is as well arranged and as economically planned and built as the one in St. Johns. Of course, Mr. Hicks, who was back of the proposition with the Doctors Hart, as I understand it, sent people all over the country to see new hospitals, and he made particular inquiries as to what they would do differently if they were doing it over again, as well as what they thought of their own peculiar features that were of advantage. It is a very fine hospital, and I would recommend to anyone who has anything to do with building hospitals to take a look at it.

Dr. Joseph Johns (Ionia): We have a community hospital in Ionia that started in 1927. I

practiced there for over nineteen years. Since we did not have any hospital facilities, our cases had to go to St. Johns or Grand Rapids, sometimes on a truck and sometimes anyway patients could be taken.

Due to appendicitis, our mortality was very high, some physicians claim as high as twenty per cent. The injury cases, automobile accidents and the like, we used to take to Grand Rapids or to private homes, and the conditions were very unsatisfactory. We opened up a little community hospital in 1927. The last record showed that we had only one-seventh mortality in appendicitis. They also handled all accident cases, and major surgery was done, the patient kept in the town and operated and a local man took care of the case.

The first year we handled 400 surgical cases alone. The community hospital is not as well equipped as the St. Johns hospital or Grand Rapids, but certainly the mortality has been reduced a great deal by having such a place. We are pretty well fixed, but still the people of the city are not enthusiastic about it. Of course they are gradually coming to recognize the importance of a community hospital. I believe different societies of Ionia have been taking part, and some day we will have a larger place. They are coming to see the value of a community hospital.

Dr. Arthur O. Hart (Closing Discussion): The object of the paper was simply to call attention to a few very important facts in relation, of course, to that kind of work about which I know most. I have visited, within the past two or three years, at least two hospitals in which there were from \$75,000 to \$250,000 invested, and their plan of organization consisted in hiring a superintendent and a few nurse assistants and putting a medical director of the county society on the staff and saying, "Go to it," with not a rule or a regulation of any sort by which to go.

In one of those to which I returned after a year, I found they had very few cases in the hospital, five or six. It was a thirty-five bed hos-

pital. The rest of the people had gone some place else. They should be all highly organized hospitals with everything that enters into producing good service. There is no reason why hospitals costing from \$75,000 to \$250,000, with anywhere from twenty to seventy-five beds, should not be just as highly organized according to the needs of the institution. I have seen some very bad results in small hospitals, but it has been largely due to the fact that there were no rules or regulations, no plan of organization, and anybody could do anything they wanted to do. The rules and regulations prepared with the assistance and advice of some of the best hospital authorities in America and submitted with many compliments from men expert in that thing, could be considered almost ideal for that size hospital and have worked very well. We have thought it worth while at least to write a paper presenting some of the facts. Of course, there are many other things that might be said about hospitals in relation to all the different details that have to be provided, both in relation to the community and in relation to the doctor, and especially in relation to the patients, who probably are the most important people who ever go into a hospital, although sometimes other interests apparently dominate. I think it is worth while to give consideration to every factor that may have to do with the true interest of sick folks, and that hospitals should actually be organized and run entirely for the benefit of the sick, with no consideration to other interests, at least with paramount consideration for the interests of the sick. When that is done, I notice in towns and small cities to which I go where there are hospitals of from twenty-five to seventy-five bed capacity, many of the people go to those hospitals. We have a great majority of the people around our community, probably ninety per cent, go to our hospital, and we get some from other places, of course, and I believe that the proper effort to organize in the interest of the people that are going to be there sick is worth while.

ANOTHER EXPERIMENT IN MIDDLE CLASS MEDICAL CARE

In February, 1930, the trustees of the Massachusetts General Hospital will open a new unit called the Baker Memorial. The Rosenwald Fund Committee has agreed to underwrite one-half of the deficit in operation of this hospital during its first three years up to a maximum of \$150,000, with the understanding that the deficit will not exceed \$75,000 in any one year. The Baker Memorial has been designed for the care of sick people of moderate means. It is pointed out in the *Massachusetts General Hospital News* that the care of the sick in this unit will include voluntary curtailment of physicians' fees so that those entering the institution will pay a maximum fee of \$150 for any illness or operative care and that the maximum fee for uncomplicated obstetric service and hospital care will be \$100. Only members of the staff of the Massachusetts General Hospital and of the Massachusetts Charitable Eye and Ear Infirmary and the obstetric staff will be permitted to practice in this institution. This hospital has been definitely planned and constructed, and is to be quite definitely operated, as a middle class institution. The employment of special nurses will be discouraged. Ward maids, nurses' helpers and floor clerks will be utilized so that nurses will devote all their

time to actual bedside nursing. A special social service department will control the class of patients to be admitted. The institution will have 333 beds, part of which will be used at first for the interns and the nurses, since special buildings for this purpose have not yet been provided. There are to be eighty-eight beds in single rooms, twenty-four beds in two-bed wards, twenty-eight beds in four-bed wards, and eighteen beds in cubicles. For obstetric patients there will be twelve beds in single rooms, six beds in two-bed wards, and eight beds in four-bed wards. Private rooms will cost \$6 a day, cubicle beds \$4 a day, and the two-bed and four-bed wards will vary between these figures. Nursing, food and ordinary drugs are included in this price. Special fees will be charged for laboratory work and for roentgen-ray work. It will be interesting to see whether this experiment can operate successfully and pay its own way. It will also be interesting to see whether there is any considerable percentage of the middle class who can save enough money to take care of themselves under these conditions. The fees are not apparently much greater or much less than those charged today in most of the hospitals in the United States.—*Jour. A.M.A.*

GALLBLADDER DISEASE AS A CAUSE OF DEATH*

EARL INGRAM CARR, M. D., F. A. C. S.**

LANSING, MICHIGAN

So much has been written and said on the subject of gallbladder disease that it seems trite to choose this subject. It is, however, so common a disease and operations on the gallbladder are so frequently done that it is a timely subject and one which confronts us daily. Furthermore, vital statistics on this subject are surprising to me and seem to be worthy of attention.

The vital statistics of Michigan show that 2075 deaths occurred from all diseases of the liver during the five year period of 1924 to 1928, inclusive. These deaths are listed under two general headings. Under No. 123, entitled "Biliary Calculi," there were 693 deaths during this five-year period and under No. 124, "Other Diseases of the Liver," there were 1,382 deaths during this five year period. Contrasted to this, 31,032 deaths occurred from appendicitis alone in a similar five-year period, 1921 to 1925. This shows a yearly average of only 417 deaths from liver diseases of all kinds against a little over 6,000 deaths yearly from appendicitis.

When we stop to consider that the liver has more functions to perform than any other organ in the body and is one which an animal cannot live without, it makes these comparatively few deaths attributed to the liver unreasonable.

Medical and surgical management of diseases of the liver and gall tract are rather meager, surgery of the gall tract being the only direct and definite therapeutics that we have unless cholagogues are cholagogues and duodenal drainage drains. Further than this, we treat by regulation of diet of both kind and quantity and by reducing or restricting exercise so that in either or both instances, the work of the liver is lessened. Some of us believe that physiotherapy is helpful.

It does not seem likely that medical and surgical management so prevent death in diseases of the liver that in the whole State of Michigan there are only a few more than four hundred deaths a year.

Let us consider briefly some of the various functions and the physiology of this important organ. Through the portal circulation, the gastro-intestinal tract and the spleen have a direct intimacy. This provides for carbohydrate metabolism and the storage of glycogen and for protein metabolism. It also gives the opportunity for the detoxification of many substances which, if liberated into the general circu-

lation, would be poisonous. The liver has a secretory function and also an excretory function. There is a pigment metabolism that takes place in the liver. The liver bears a relationship to coagulation time of the blood. Emotions and shock affect the liver.

From the knowledge of these functions, the various methods have arisen for the determination of liver function, as (1) the excretion of foreign products where dyes are used; (2) tests dependent upon pigment metabolism; (3) carbohydrate tests; (4) disturbed nitrogen metabolism; (5) detoxification; and others.

The relation between the liver and the spleen is of particular interest. When the spleen fails in its function and when, through disease, a larger quantity of blood comes from the spleen to the liver, the burden on the liver is increased. On this account, surgical therapeutics have come into vogue, as splenectomy.

The duodenum and the pancreas have a definite relationship to the liver. MacCarty has referred to the gastro-duodeno-hepatico-pancreatic system.

The opportunities are numerous for diseases of the liver as suggested by these various relationships and burdens. For a recognition of many of the possible disturbances of the liver it requires a more workable clinical understanding than is prevalent today. If the various functional tests were applied, possibly existence of liver disfunction could be identified or suspected sometimes. We seldom offer a diagnosis with reference to the liver other than a gall tract lesion or disease or an abscess or a neoplasm of the liver. In former days we had occasion to speak of the various cirrhoses. Acute yellow atrophy has come into the experience of some. I met one in which leucin and tyrocin crystals were obtained but because the impossible happened and the patient recovered, some may doubt the diagnosis. I knew of another acute yellow atrophy case which

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conformed to convention and died as the consultant, Dr. J. B. Murphy, prognosed. The diagnosis of a third case which was fatal was not proven.

I think we quite readily recognize trauma of the liver. In the case of a middle aged woman who was recently injured in the left side and who is recovering, the blood picture on the 8th day was:

Red blood corpuscles, 2,000,000; white blood corpuscles, 15,000; hemoglobin, 40%; differential polymorphonuclears, 93%; differential lymphocytes, 5%; differential mononuclears, 1%; many microcytes and microblasts.

Clinically and from X-ray it appears that she had fractured ribs with a contused lung and probably contusion of the liver and spleen. The latter part of this diagnosis would have been missed by the clinicians without the blood picture which lead to more detailed scrutiny as to the reasons for it.

Another very important opportunity for gall tract disease is appendicitis and, in my opinion, disease of the appendix is a very common prologue to cholecystitis, through the lymphatics. One of the commonest points of history in cases of suppurative cholecystitis is previous suppurative appendicitis.

Let us turn our attention to some of the diseases or conditions resulting from liver and gall tract disease. As a matter of fact, how often do we recognize the manifestations of disordered function of the liver aside from biliary obstruction or some gross anatomical or histological change? I mean by we, the clinicians. Focal infections are quite generally considered and nephritis, the cardiac lesions, etc., are commonly attributed to cholecystitis. I wonder if death certificates show this when death results from this sequence of disease?

Colitis has been a definite reason for ill health in a number of cases of my knowledge where it was known or was eventually learned that a suppurative cholecystitis had existed for a considerable time previously. It seems natural to infer that colitis in these cases resulted from the infection expelled from the gall tract.

Neuritis, myocitis, arthritis, synovitis, or any other conditions which might come under the general term of rheumatism may result from the focal infection, cholecystitis. Any suppurative disease may result, also.

Any consideration of the mortalities of liver and gall tract disease is not complete

without attention to the surgery and methods of surgery in vogue. To illustrate practice in gall bladder surgery, I chose three Michigan hospitals and ten surgeons and used the year 1928. The first hospital is one of the largest in the state. The second is not so large. The third is a smaller hospital, i. e., about one hundred and twenty-five beds. The Staffs are well organized and regulated by different types of administration. In these three hospitals, 857 cases of gallbladder disease were studied and 168 cases operated. There were 12 deaths attributed to surgery. There were 2 deaths of gallbladder disease not operated. This shows a death rate of 7.1% for the cases operated.

I selected ten surgeons of Michigan who represent the most prominent among the teachers and the surgeons of the principal cities and communities and submitted five questions. Nine surgeons responded. Absence from the country of the tenth prevented his response. These questions are very general and the answers could only represent a tendency.

The five questions and answers are:

1. Do you operate acute cholecystitis?
Answers: 7 yes; 2 no.
2. Do you prefer a cholecystectomy or cholecystostomy in acute cases?
Answers: 5 preferred ectomy; 4 ostomy.
3. Do you usually do a cholecystectomy in a chronic gallbladder?
Answers: 9 yes.
4. Do you usually do a cholecystectomy when there is much oedema in and about the cystic duct?
Answers: 4 yes; 5 no.
5. Do you do a cholecystectomy in a case of recognizable hepatitis?
Answers: 5 yes; 4 no.

Twenty-five years ago, the removal of stones and drainage operations seemed to be practically the universal operations on the gall tract. Twenty years ago, this was almost as true, but in the ensuing few years, cholecystectomy became very popular and, in retrospection, I think we may say this operation was done rather promiscuously. Experience has taught us that acute cholecystitis demands similar considerations to those we have learned to apply in thyroid surgery. If possible, we wait for a propitious day for operation. We weigh the possibilities and ask ourselves, will this patient tolerate the acuity of the gallbladder infection and give the opportunity for a day of lesser surgical risk, or is the surgical risk today less than the danger of the disease itself? Similarly, in those acute cases where immediate surgery seems to be the safer course, methods

are compared and their risks estimated before the type of operation is determined. I think that most of us prefer to take out a chronic gallbladder which is a menace to good health.

There are two or three particular and outstanding situations which menace good results in gallbladder surgery among the patients who measure up to a reasonably satisfactory physical status in general. Obesity, previous surgery and previous severe inflammatory processes may make individual difficulties with any case peculiar to that case.

Oedema of the cystic duct is significant of changes which I have come to regard as a danger signal. The significance of its cause is fundamental in causing one to pause to consider the more than usual dangers from cholecystectomy. It usually is significant of recent acute inflammation. This recent inflammation may include much of the gastro-duodeno-hepatico-pancreatic system.

When recognizable hepatitis presents, one considers the chronicity of it. Hepatitis is another stop, look and consider sign. Drainage may be needed now or it may be needed later. Two surgeons emphasized the importance of drainage of the cystic duct and I suppose under these circumstances. Of course, an impacted gallbladder or some duct obstructions have to be met in providing for the peculiar needs of the situation.

Evidence of pancreatitis requires a careful selection of the surgical method chosen.

It has come from a number of sources that pneumonia is a common cause of death among these cases of post-operative cholecystectomy deaths. In instances of this sort that have come into my experience, there was evidence of recent or present inflammation. On this account, I have wished that a drainage operation had been done instead, believing that mortality might have been avoided. I have done a cholecystostomy because of the evidence of recent inflammation, tided the patient over the dangerous period of the disease in this way, then at a later time, removed the gallbladder.

Uncured gallbladder cases treated by cholecystectomy might result more happily if two stage operations were more frequently employed. A cholecystectomy with drainage of the cystic duct may meet the requirements in some cases.

I have dealt in generalities in this paper and, necessarily, very briefly. The inclusion of many interesting topics is pre-

vented by the limited time and space. May I leave with you, however?

1. Liver deaths are inadequately reported.

2. Opportunity for better clinical judgment lies in closer attention to liver functions.

3. The diagnosis of cholecystitis does not imply immediate surgery.

4. The time for gallbladder surgery is when the risk is least.

5. Signs of acute or subacute inflammation, as oedema about the cystic duct, hepatitis or pancreatitis, require one to consider well before deciding upon a surgical procedure.

DISCUSSION

Dr. Henry Vanden Berg (Grand Rapids): No matter what clinical branch of surgery we are interested in, all clinicians are very much interested in gallbladder disease, the medical man as well as the surgeon, of course, because it is so common. I am sure, therefore, that everybody has appreciated this general discussion by Dr. Carr. A general paper is what we like on a subject of this importance. Stomach symptoms and headache are the most common complaints that we see. Most of them are not caused by gallbladder, but the gallbladder holds second place. The greatest number is functional in nature. The neurotic individual with a number of complaints will oftentimes feature stomach symptoms. If he does not feature them he probably has them. So we certainly are all interested in stomach symptoms and in the cause in this case, we will say, of gallbladder origin.

In getting at the matter of our statistics, it is well to begin with the gallbladder as a focus of infection, I think. These statistics certainly cannot be very reliable. Dr. Carr hinted at it at different times. For example, we will say 2500 patients died in Michigan in five years of disease of the liver, including the gallbladder. That probably is not so. Many conditions that have been attributed to the cause of liver origin are probably incorrect. For example, we will see in our vital statistics that a patient died of carcinoma of the liver. That means that he did not die of carcinoma of the liver at all, probably because carcinoma of the liver is a very rare condition, secondary to carcinoma of the gallbladder, which seldom if ever occurs without the absence of gall stones, or secondary to carcinoma of the gastrointestinal tract.

When we say a patient dies of an aortic aneurysm, we have a good comparison. There is a nice, beautiful specimen in our exhibit downstairs. In many cases that would be recorded as a patient dying of aortic aneurysm. He did not die of aortic aneurysm; he died from syphilis, although the vital statistics will show aortic aneurysm. A patient dying from spinal cord disease following syphilis doesn't die from spinal cord disease; he dies from syphilis. So it is, I think, with many of these complications where patients are recorded to have died of gallbladder disease. Myocardial failure, for example, may be of gallbladder origin. I am wondering how many patients lose a good many valuable years of their lives because of gallbladder disease. A good many probably could have lived five or ten

years longer if their vital organs had not been damaged. In many cases where a patient dies at, say sixty-five, the machinery has run down, as it were. Why has it run down? It is hard to put your finger on any one thing; his heart is weak, everything is sort of out of gear. Isn't it a good question to bring up: Might that patient not have lived longer if his vital organs had not been damaged, and in this case we will say of gallbladder origin? That may be from any focus of infection, of course, but we do know that the gallbladder is so often the seat of infection.

Dr. Carr did not mention the complication of carcinoma of the gallbladder. It is not such an insignificant one. The pathologist of the Ford Hospital downstairs will tell you that it is from five to twenty per cent. I think twenty per cent is very high; it is probably nearer five. Nevertheless, it is something worth thinking about.

In the last summer we have had two cases of obstruction of the bowel from gall stones. If those patients had died it might have been recorded, had they not been operated under ordinary conditions, that the patients had died of obstruction of the bowel. It is true, in a way, that they died from obstruction of the bowel, but they nevertheless died from their gallbladder disease. That is why I say our vital statistics can be so inadequate.

The best data we have for our vital statistics come from the surgeon, because in this country we have so few post-mortems.

One thing struck me in this little synopsis of Dr. Carr's paper. It says that gallbladder surgery is so frequent that it has become ordinary surgery. I don't know of any surgery that requires greater skill in many cases than gallbladder surgery. A bad, complicated gallbladder, one with extensive surrounding adhesions, is technically a difficult one to operate. I don't know of any surgery that requires better surgical judgment than cases of this kind. Also, a knowledge of gross pathology is very essential in doing this work. Every year, any surgeon who does a good deal of gallbladder surgery will meet cases of obstruction of the common duct following removal of the gallbladder because the common duct has been injured. And those cases are extremely serious and extremely difficult to correct. It is impossible to give a good many of those patients any relief. Those patients usually die. Those patients die because of poor technic, indirectly from their gallbladder trouble to begin with, to be sure, but that is the responsibility that comes back to the surgeon. The surgeon must know his pathology. In doing this technic, I think it is important, unless you can definitely dissect out, visualize your cystic duct, that you should never go in there and if it is all plastered in there and he cannot separate it, he should open his gallbladder above and split it down empty the gallbladder, drain the gallbladder if that is what you choose to do in that case, or, if there is a stone lodged in the cystic duct, a mural stone that you cannot remove, you have to go right down there and remove it all.

Dr. Carr brought up this question of cholecystostomy in the removal of the gallbladder. There are cases, of course, where you want to keep the gallbladder, and especially in connection with pancreatitis that was mentioned. If you get ahead of the pancreas that is hard, and it is difficult for you to tell many times whether you are dealing with a chronic pancreatitis or malignancy, you had better not take out your gallbladder. If

you have access to a good laboratory where you can make a frozen section, it can be determined in that way. If not, then don't remove that gallbladder, but do a cholecystostomy or a duodenostomy. We have done a few of those and they have given good results.

If you drain what Dr. Carr calls the cystic duct, that means you are removing practically all your gallbladder. You have got a good result in those cases. I don't see any necessity for going back and doing a second operation. It is seldom necessary anyway to do a second operation. After all, from a gallbladder drainage in many cases you do get rather surprisingly good results. On the whole, it probably is better to remove the gallbladder, to remove the disease, and get in that way better results.

Relative to what the doctor said about appendicitis, 6,000 cases dying of appendicitis as against 400 cases of liver disease, that certainly is not correct. Appendicitis is so much more obvious and outstanding. When he said that, the difference between an exophthalmic goiter and an adenomatous goiter shot through my mind. An exophthalmic goiter flares up and makes a great big display and you can diagnose it in a moment's time, whereas an adenoma of the thyroid, which is toxic, and slightly toxic, works so stealthily that it may go unrecognized. I think that is probably the cause of these figures. We surely are mistaken. It brings it back again to the question of the reliability and dependability of our vital statistics.

I just want to sum up what I have said about the gallbladder leading to ill health, as the doctor has brought up, and I want to bring up the question, especially, of the gallbladder shortening life through damaging the vital organs, having machinery run down. If the foci of infection had been removed, whatever they are, a good many of these patients might have lived longer. We inherit a certain longevity. Suppose I inherit longevity, but I am just showered with infections over a long period of years, damaging my vital organs. I may die at sixty-five, I may die at seventy. Nobody can figure out just exactly why I did—myocardial failure, and so on and so forth. I believe it is a good question to bear in mind. When a gallbladder comes and we treat it medically and we can do no more than give symptomatic relief, as I see it, it brings up an important challenge that we should give these people better advice. It is a condition we can procrastinate on. The patient certainly wants to procrastinate on it. He goes along twenty or thirty years with the symptoms no worse, evidently, than at the beginning, but the pathology has progressed and he is very much worse off. If these patients die from acute complications, it has been a mortality of delay.

Dr. W. J. V. Deacon (State Vital Statistician, Lansing): There is a very interesting thing to me in this paper of Dr. Carr's which is the fact that we have relatively few deaths from a very definite disease. The reason for that may be found, possibly, in the fact that the classification is based more frequently on the diseases of other organs, many of which are damaged by the liver condition, if you please, and the resulting death goes to the other organ.

Recently in New York a committee that has to do with this classification gave a great deal of discussion to this particular subject. I think we recognize the fact that we are not showing the facts, and would like very much to have the opportunity to present something more definite.

Of course, in those cases which develop malignancy, eventually the classification would not go to the liver but would go to the malignancy. I find, also, that in about sixty per cent of all cases of deaths there is stated to be some contributory condition, that is either frequently the heart or possibly pneumonia. It scatters through the whole category, but those are the principal contributory causes given.

Another interesting fact is that we are dealing with a disease which attacks and proves fatal about ten years earlier than the ordinary group of so-called organic diseases.

The greater percentage of our deaths occur in the fifty to sixty-five year group, whereas in the other organic diseases we find it is about ten years later. Another interesting fact to me is that about sixty to seventy per cent of the deaths from this cause are in females. Just why this is I do not know. The only liver condition that shows a higher percentage of males is cirrhosis

of the liver, and we can understand that when we consider that alcoholic cirrhosis is included in that group. Just what we can do to bring this to a better understanding I don't know. On the matter of classification, we are up against foreign opinion, and our Scandinavian and German friends seem to want to bury diseases of the gallbladder and liver in other causes, that is giving the preference in almost every other case to any contributory condition which may be included. But the one important thing I think you gentlemen should bear in mind is that you are dealing with a condition that is exceedingly serious, that it attacks at a time of the greatest industrial value, economical value of the individual, and that the deaths listed under that head represent only a small fraction of the damage which the disease does.

Dr. Earl I. Carr (Closing Discussion): I haven't anything further to add except that vital statistics are of no more value than the reports and the diagnoses of attending physicians.

LIGHT THERAPY IN OPHTHALMOLOGY*

RAYMOND J. SISSON, M. D., F. A. C. S.**

DETROIT, MICHIGAN

The attention of the whole world has within the past few years been concerned more intently with the value of heliotherapy in the treatment of disease in general affecting the human body, and recently of its value in the treatment of certain diseases of the eye.

The role of sunlight in the treatment of disease of the human body is broad in its scope. The importance of sunlight in the life processes of animals and plants is well known and requires no emphasis. The exact manner in which these results are produced is not entirely clear.

It has been found that certain eye diseases respond particularly well to radiation with ultra-violet light and almost all conditions are benefited. There have been few reports in the American literature concerning the use of ultra-violet light and the results obtained. Some of the ophthalmologists in Germany have advanced the most extravagant claims for this type of treatment which in part I have not been able to substantiate.

In general, the spectrum is divided into the infra-red portion, or heat rays, extending from the longest waves, 2000 millimicrons, to those about 760 millimicrons. The visible spectrum is 760 millimicrons to 395 millimicrons; the ultra-violet portion extending from 395 millimicrons to about 200 millimicrons. The X-rays are below the latter. It has been found in the treatment of diseases of the eye that the ultra-violet rays at about 300 millimicrons have the greatest therapeutic value.

There is considerable discussion at the

present time as to whether ultra-violet rays alone are of value in the treatment of disease, or whether heat rays must accompany the ultra-violet. An abiotic effect is more quickly produced when the heat rays are combined with the ultra-violet but ultra-violet in itself will cause an increased hyperemia of the radiated area and an increase in white blood corpuscles. Heat rays must be filtered out in the treatment of diseases of the eye for the heat rays produce cataract due to coagulation of the lens proteins.

The real beginning of ultra-violet therapy was due largely to an observation in England by an engineer named Simpson. In 1914 while using a Tungsten electrode on some ore he noted that eczema was cured on the hands of some of the workmen using the electrode.

The media of the eye share the property common to all matter, that of being transparent to some of the wave lengths of the spectrum and absorbing others. It is the absorbed rays which are of therapeutic interest. It is possible that in this absorption the molecules in receiving this transfer of radiant energy are heated. The longer rays, the infra-red, produce a burn;

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the shorter, the ultra-violet, produce an abiotic or destructive effect. It has been found that at about 300 millimicrons, using the usual intensities, typical cell reaction is produced characterized by epithelial desquamation, mitosis of cell nuclei and cell proliferation.

Each cornea varies in its individual responsiveness to ultra-violet similar to the variation of the skin of individuals to exposure to sunlight. In doses of correct intensity an analgesic effect is noted. No photophthalmia leading to tissue destruction results. The cornea, aqueous and lens absorb all rays of light which might injure the retina under ordinary limits of exposure.

Verhoeff and Bell have conducted experimental investigations on the pathological effects of radiant energy on the eye and their experiments have proven that changes in the lens epithelium occur from an overheating of the eye with a consequent disturbed nutrition of the lens. There is no experimental proof that cataract is ever caused by the ultra-violet rays alone.

The Carl Zeiss treatment lamp which uses the carbon arc and a quartz hollow glass container in which a solution of distilled water or one-half per cent copper sulphate is placed to absorb the heat rays and a uviol filter which cuts out part of the visible rays, and also the ultra-violet rays below 290 millimicrons. The carbons are impregnated with a metallic core such as nickel, aluminum, cobalt, iron or tungsten which causes a greater amount of

ultra-violet rays to be available. I have used the iron core carbons and found them to be entirely satisfactory.

Laboratory experiment:

A thin smear of staphylococcus albus was taken from a fresh bullion culture and spread evenly over an agar plate. The glass cover was removed and the light was focused by means of the quartz condensing lens so that an area one inch in diameter was radiated at a distance of two inches from the focusing lens. The quartz and uviol filters were in place. The exposure time was three minutes. The cover was replaced and the plate immediately placed in the incubator along with a control plate. The portion of the agar plate which was radiated showed no growth of organisms at the end of twenty-four hours. Surrounding the radiated area there was a profuse growth as there was also over the entire control plate.

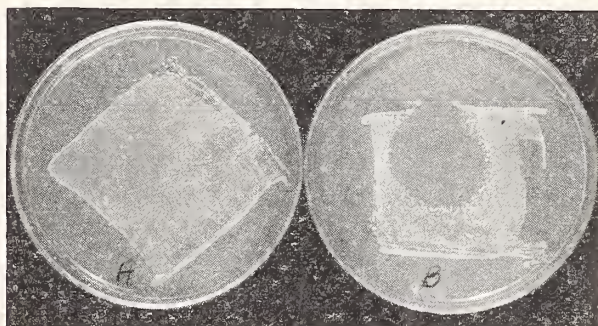


Figure 2

After 24 Hours Incubation. A. Control Plate. B. Plate Radiated 3 Minutes.

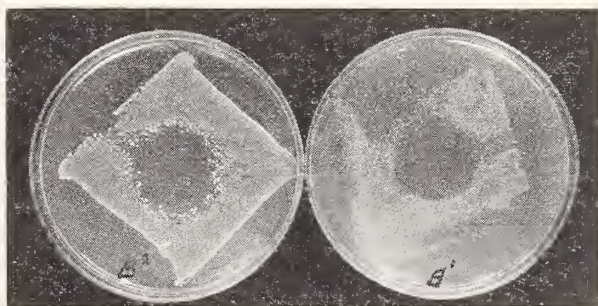


Figure 3

B-1, Plate in Fig. 3, After 48 Hours Incubation.
B-2 Plate in Fig. 3, After 72 Hours Incubation.

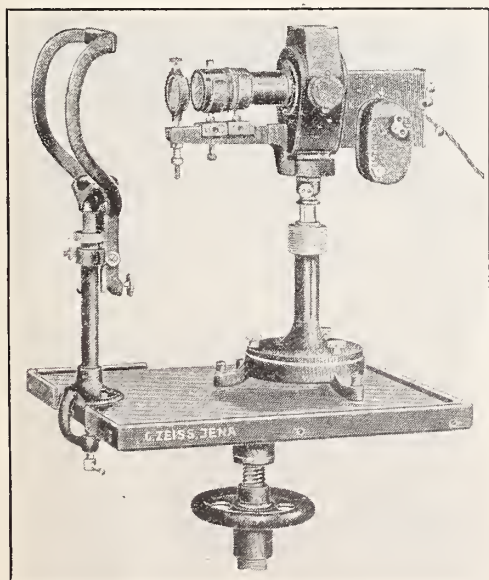


Figure 1

Birsch-Hirschfield Ultra-violet Radiation Treatment Lamp.
(Carl Zeiss)

The most marked effect noted with this treatment was in corneal ulcers. Ulcers respond particularly well. This applies within limits to any form of ulceration affecting the cornea. 147 cases of corneal ulcer were treated. Many were of the simple type. All seemed to heal more quickly. The simple forms heal, of course, without any treatment. The more severe, recurrent and chronic forms are the ones

with which we are particularly concerned. Marginal ulcers heal rapidly. I have had four cases of dendritic keratitis which had recurred at frequent intervals using the ordinary methods of treatment. It is now two years and there has been no recurrence in these four cases. Two cases of tuberculosis keratitis did not respond to tuberculin therapy but showed very rapid improvement as soon as light therapy was instituted. Two cases of interstitial keratitis, both having scars of fifteen years or more duration, were improved with vision almost doubled. Two cases of sclerokeratitis, from a focus of infection, persisted after the focus had been removed and at frequent intervals appeared to relight as was evidenced by redness, pain, extension of the opacity in the cornea and diminished vision. Two cases of Band keratitis were treated after the scraping of the calcium deposits. In two years there has been no recurrence of the calcium deposits and the thinned corneal area is more firm.

One rather striking case of keratitis e lagophthalmus responded dramatically. A nurse from the department of health had lattice-like corneal opacities in both eyes which had reduced vision since childhood. Vision with correcting lenses—O.D. 20/100-1 ; O.S. 20/200. Improved after a series of light treatments and dionin solution, with the same lenses, to O.D. 20/30 and O.S. 20/100. No conclusions are offered from this one case. I hope to have several to report on soon.

Radiation always caused a diminution of the infection and pain, and the corneal opacities have slowly cleared. Whether this would have occurred irrespective of the radiation I am not in a position to say.

Phlyctenular keratitis in children has responded very quickly and with few treatments. Trachoma has not shown any marked improvement in the treatment with ultra-violet therapy except when there were corneal ulcerations.

In my opinion, this form of treatment has a definite place in our therapeutics. It is a valuable auxiliary to other forms of treatment. It has its limitations and is not a cure-all. Caution must be used that an overdose is not given. The judicious use of ultra-violet light as an adjunct to our other forms of treatment will be very beneficial. If ever local phototherapy could be of value it should be in treating affections of the eye, for here we can control the exact dosage and also readily observe the effects produced.

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MODERN SCIENCE IS NOT SCIENTIFIC

A large part of what the public calls science and much of the science teaching in schools and colleges today is not really science, Dr. A. J. Goldforb, retiring chairman of the medical science section of the American Association for the Advancement of Science, declared at the recent meeting of the association.

"The extent to which unscientific science is taught in our schools is amazing," he said. "Mal-training like malnutrition, if long continued, has very serious and lasting effects on the organism." Evidence of scientific maltraining may be found in many of the papers sent to scientific journals which must be rejected for major and serious defects.

Science is difficult to define and few educated or "schooled" persons today agree on what subjects may be properly called science, outside of a few broad classifications.

"The experimental method, properly defined, characterizes real science and differentiates it from primitive science, from pseudo-science, from non-science, from anti-science," Dr. Goldforb said. He described the history of the development of science and compared it to the development of

the human race, science having had its primitive stages, just as man had. The primitive stage of science included the fact-finding stage and the law-formulating stage, but the experimental stage represents a more complex and modern development.

"Collections of facts do not constitute science. At best they are the prelude to science, the building blocks with which the structure of science is built," Dr. Goldforb said. "To substitute the accumulation of facts and laws or dexterity of manipulation for experimental methodology is naive, erroneous, anti-science, the cartoon of science."

Fact and law worship dominates the science courses in nearly all schools and colleges, Dr. Goldforb said. He believes that the methods of experimental investigation may be pursued long before work is done for the doctor's thesis, and he looked forward to the day when there would be more scientific teaching of science in all schools and closer co-operation between all scientists, no matter in what branches they are engaged.—Science Service.

THE STATUS OF MODERN SURGERY IN MASTOID INFECTION

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An operation on the mastoid, like that of the removal of the appendix, was, in the early history of our Hospitals, considered to be a very serious and a hazardous procedure.

As an instance: Since the time of the first opening of Harper Hospital in 1884, great advances have been made in all lines of surgery. One of us (Doctor Campbell) came as a student to the old amphitheatre at the Hospital to see the first abdominal operation performed in the City of Detroit. It was an event of great interest—the entire Medical School was present; the abdomen was to be opened and the appendix removed. The removal of the appendix has now become very commonplace, and the mortality for the operation has passed from one that was very high, to one that is now very low. In the same way, other fields of surgery have shown remarkable progress—so it is that the Otologist has been able to make the mastoid, as has the general surgeon the appendix, one of the safest operative fields in medicine.

IMPORTANT FACTORS

It is quite to be expected that many of the factors that worked to improve the end result in the surgery of the appendix, have been equally as important in influencing surgery of the mastoid. Among the important factors, we should name:

- 1—Early diagnosis and operation.
- 2—Strict attention to surgical technique.
- 3—Improvement in post-operative treatment.

The mastoid, like the appendix, lies in a neighborhood closely adjoining vital structures. For this reason, the chances for prompt and satisfactory recovery are greatly favored if our case is operated before the pathology has extended beyond the anatomical limits of the part involved. That is, before we have present one of the more or less serious complications.

A discharging ear may lead to a most serious situation and deserves one's earnest and best supervision. Let us enumerate certain signs and guide-posts, by which one may judge and advise when an infection in this region is not progressing satisfactorily, and state when and what type of surgery is indicated.

ACUTE MASTOID INFECTION

The principles and rules for the treatment of acute infection and abscess formation in other parts of the body should apply to infection and abscess formation in the mastoid area; namely, that an acute

confined abscess must have satisfactory drainage before it will heal. If the drainage is not established, the limits of the abscess will continue to extend until some avenue of exit is found. In other cases, if drainage is unsatisfactory, the acute abscess may pass on to a chronic infection with fistula formation and foul discharge.

To properly understand infection of the mastoid, a few points concerning the anatomy of the part should be established.

First—the middle ear and the mastoid stand as two adjoining rooms in a house, except that there is no connecting door. There is however, a small connecting passageway up near the ceiling corresponding to a transom between two rooms. This passageway we term the mastoid antrum. Certain other points can be made clear by a continuation of this rather homely simile.

The relative size of the two rooms would be as a pantry or vestibule to a large living room, the smaller of the two, standing for the middle ear, which is only slightly over $\frac{1}{4}$ of an inch in its dimensions. The mastoid is from three to five times this size and stands on a lower level than the middle ear, as if the middle ear was on the ground floor, while the mastoid is carried down to the level of the basement. It is by a consideration of these points that one will be able to interpret many of the manifestations of mastoid infection. Thus it may be seen how infection that has reached to the tip or lower level of the mastoid, may find difficulty in drainage that must cross up and out over the small transom or the mastoid antrum.

The mastoid is not one large unoccupied room, but it is filled with cells, as one piece of furniture might be piled up on another, until the room was filled. If the room is to be thoroughly renovated, all the furniture must be removed, and just so in the case of an infected mastoid all the cells must be removed, if we are at-

tempting to do a complete clearing out of the mastoid cavity.

There is only one opening into the mastoid cavity which as we have indicated is the mastoid antrum, connecting the mastoid space with the middle ear. The middle ear in turn, has a connection with the throat by way of the Eustachian tube. Another avenue of exit may be established from the middle ear; namely, by an opening in the drum.

The middle ear being a very small and more or less unobstructed space, infection here with its resulting exudates soon fills our space and brings pressure. The most natural thing to happen as the middle ear fills under pressure, would be for the infection to pass or overflow through the mastoid antrum, and come into the larger and more spacious room, the mastoid.

This extension will usually occur in the first two or three days of the ear trouble. Pressure over the area just back of the external auditory meatus will show tenderness, and this marks the first invasion of the mastoid. At this point one of two things will commonly happen. Either the drum is incised, or ruptures itself, and we have our first effort at drainage of the abscess. In most cases this anterior drainage or drainage by way of the middle and drum will be quite satisfactory and in a few days we find the tenderness over the mastoid antrum disappearing. In other cases a different course will be followed.

If we limit our consideration to those infections which progress by the breaking down of trabeculations and true abscess formation, there are four possible terminations:

First—a cure by anterior drainage; i. e., drainage through the mastoid antrum and out by way of the middle ear.

Second—a cure by posterior drainage, established by an opening in the mastoid cortex. (Simple mastoid operation.)

Third—the confined abscess extends its boundaries and comes to involve one of the vital structures nearby. (Sinus thrombosis, meningitis, labyrinthitis, dural abscess, or even brain abscess, often terminating fatally.)

Fourth—the infection becomes chronic because of insufficient drainage, and the patient continues to have a chronic discharging ear. (Which may at any time require radical surgery.)

Once it is evident that anterior drainage is insufficient, one should proceed at once to give satisfactory drainage by opening

the mastoid cortex and doing a complete and careful exenteration of the mastoid cells.

How is one to know whether anterior drainage has failed? It is beyond the scope of this paper to discuss in detail all the possible signs and symptoms of a mastoid requiring operation, but there are a number of observations which apply to abscesses in general, by which one may get valuable information:

First—an abscess that is draining properly should soon show an improvement in all its local manifestations; the tenderness found on pressure over the antrum, the tip and posterior border, the thickening of the periosteum made out by careful palpation of the mastoid surface, the swelling and redness of the adjacent soft parts, the character and the amount of discharge, the appearance of the drum, the presence or absence of drooping of the canal wall. These are the local manifestations of an acute infection of the mastoid cavity and are valuable guides and sign posts which will aid one in judging the progress being made.

The return of tenderness has in nine out of ten of our cases proven to be a positive indication for mastoid surgery. A limited number of cases may carry on to a satisfactory termination following a re-incision of the drum. However, we are not in sympathy with the practice of frequently repeated drum incisions. A few cases will profit by a second or third drum incision, but by far the majority of the patients that are being subjected to multiple drum incisions have progressed to the point where they will not get satisfactory drainage through the opening in the drum, and are therefore cases that should have a careful and complete mastoid operation.

The question of discharge is one deserving some special comment, for here we have the one sign that points the way to chronic mastoid infection, with its attending serious loss of hearing, intracranial complication, and the necessity for radical mastoid surgery. The average ear that has the drum opened and is followed by a profuse purulent discharge will run through a fairly typical course in regard to the amount and to the time it will discharge, the drainage being quite profuse by the end of the first three or four days and continuing so through the second and third week, showing a decrease in the end of the third and through the fourth week, to be completely healed by the end of the fifth week. The case that comes to the end

of the fifth week and still shows a profuse purulent discharge is on the way to a chronic mastoid. Anterior drainage by way of the drum has not been sufficient and therefore our abscess is not healing. It is here that we should urge posterior drainage and do a complete simple mastoid operation. The patient may have no other symptom than the continuation of profuse purulent discharge through the middle ear.

X-RAY DIAGNOSTIC AID

A very satisfactory method of diagnosis of mastoid disease is the X-ray. This method has become so well standardized that the only variable factor in the final result—the finished radiograph, is that due to disease. The density of the mastoid cellular area is increased by exudate and involvement of the bony parts is characterized by decreased density. Stereoscopic films may be made showing the mastoid area in three directions, or both right and left mastoids may be taken on one 8 x 10 film by the so-called Granger method. This facilitates comparison between the right and left or normal and pathologic mastoid as the case may be. The slightest variation in density or first degree mastoid may be noted; the second degree is that of increased density with the cell septa or trabeculations still visible. In the third degree the involvement includes the cell septa and mastoid periosteum as well. If for any reason the surgeon finds it advantageous to keep the patient under observation, the radiographic findings may be used to check up the pathologic condition. An occasional case will be found in which the clinical manifestations are much more severe than the radiographic findings indicate. Of course in such instances the condition of the patient should be the deciding factor regarding surgical treatment.

CANCER AND ULCER MOST COMMON STOMACH DISEASES

"Cancer and ulcer of the stomach are the two most common diseases encountered in this organ and are easily recognized by means of the X-rays," Dr. Maurice Feldman, associate professor at the University of Maryland Medical School, declared at the Toronto meeting of the Radiological Society of North America. Early diagnosis offers the best chance for recovery from cancer, and from ulcer, too. But the early symptoms of these diseases are vague. Too often the patient puts off seeing the doctor about what he thinks is only indigestion. The physician, even when consulted early, cannot determine the presence of these diseases without an X-ray examination.

"When the disease has already resulted in destruction of tissue, the condition may be easily

CHRONIC MASTOID INFECTION

One needs only to take note of the many chronic discharging ears that we see in the clinics and in private practice, to be impressed with the thought that many infected mastoids have been neglected. There is possibly no other place in the human body, where an acute abscess will be neglected as unimportant and permitted to go on to a chronic foul-smelling discharge, as often as in the ear. This statement applies to an attitude assumed by the layman as well as by the general medical profession.

It can be safely stated that the great percentage of all chronic discharging ears were at one time in their life history, acute mastoids which if properly operated, would have healed satisfactorily, and have given the patient no further trouble and most likely have saved for him a normal hearing. The same statement can be made for most of the cases of brain abscess as well as the other intracranial complications following infection of the mastoid.

One has only to stand by and see a patient die from brain abscess or from meningitis, complicating acute or chronic mastoiditis, and he will be impressed with the responsibility one takes who insists that a discharging ear is a trifling affair.

SUMMARY

The information on which one judges the needs for mastoid surgery following acute mastoid infection, comes from a study of the common manifestations of abscess formation. Our conclusions are governed by the rules and principles of modern surgery applying to the abscess in general; namely, that an acute abscess must have satisfactory drainage before it will heal properly.

recognized," said Dr. Feldman, speaking of stomach cancer. "But this is often a late stage of the disease.

"X-rays offer the earliest positive diagnostic signs of cancer, which can in no other way be determined. The necessity of a thorough X-ray examination is extremely essential in every case of digestive disturbance which is not promptly relieved by ordinary remedies.

"Cancer of the stomach must be diagnosed early if relief from this condition by surgical means is to be obtained. This likewise holds true in cases of ulceration. Early diagnosis of this affection, while the condition is yet superficial, may mean a rapid recovery without any complications, when placed under the proper medical care."—Science Service.

THE PREVALENCE OF PULMONARY TUBERCULOSIS WITH ACUTE ONSET*

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The chronic nature of pulmonary tuberculosis has, in the majority of cases, been stressed so much that it has almost been lost sight of that there are frequently acute manifestations of this disease other than the dread miliary distribution, or the florid caseous pneumonia.

For many years it has been taught that pulmonary tuberculosis begins in the apex and slowly progresses to involve more and more of the lung as time goes by until what had been a minimal case in extent went onto moderately advanced disease, and finally far advanced. In reviewing from time to time the cases coming under observation in their distribution as to stage of the disease, it has been noticed that a large number of cases were diagnosed minimal, and a very large number far advanced. Another striking fact has been noted also; namely, that many patients who present themselves with far advanced pulmonary tuberculosis give a history of only a short illness, a matter of a few weeks or a few months at most.

In order to note more systematically just how often these more or less acute cases occurred, and, further, that we might seek for symptoms or signs that would aid in recognizing them earlier, a large group of patients was studied intensively, to determine the time of onset as accurately as possible in relation to the first known disease in the individual and to note what happened in the interim. Further, it was noted the location and extent of the lesion and its type, whether exudative or productive.

A group of two hundred consecutive admissions who had pulmonary tuberculosis were carefully studied as indicated. Of these 105, or 52.5%, had a sudden or acute onset; whereas, 95, or 47.5% had an insidious onset from the history of symptoms.

This is very striking, indeed, when we realize that more than half the persons developing pulmonary tuberculosis begin their trouble acutely. The symptoms are usually those of an acute cold or influenza-like attack, with malaise, fever, catarrhal symptoms, often some cough lasting from a few days to two or three weeks, from which recovery is slow. Often a complete recovery is not made, though more frequently than not the patient tries to go about his usual duties, and may be able

to do so for some time before he breaks down again.

It is at the time of this second break down that usually the diagnosis is made, and the extent of the trouble already is advanced with cavity formation. For instance, the 105 patients with sudden onset had cavities in 72 of the number, or 68.6%. But more striking still, 27 of these had a duration of less than six months, and 22, or 81%, of this number had cavities, indicating that cavity formation is a quite early manifestation of the disease. This is further borne out by the fact that the percentage of cavity bearers does not increase with duration of disease.

Another factor of great importance noted in the study was that a large percentage of these patients had the apex free of disease, 45 or 22.5% being entirely free, and 36, or 18%, more showed relatively free apices; while 119, or 59.5%, showed apical involvement. Those cases who had free apices usually had an exudative type of lesion in the infraclavicular or mid-lung regions.

It was most interesting to find that 95% of the cases with free apices had an acute onset; whereas, only 30% of those with apical involvement had had a sudden beginning of their trouble.

From these findings it seems that it is of real importance to determine the type and location of the lesion because of the prognostic significance. It has a great bearing upon the type of treatment to be employed.

The practical application of this study to the diagnosis and treatment of pulmonary tuberculosis lies in the observation that while pulmonary tuberculosis may be a chronic disease, it is in many instances a disease of sudden onset, which progresses rapidly to advanced disease and then may go into a chronic state. If the disease can be caught at the onset the chance for recovery with proper treatment is far better than after the destruction that goes with advanced disease has occurred. Further,

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there is also the observation that even where the onset is insidious, there may be acute exacerbations in many instances which may go unrecognized unless carefully sought after.

These findings clearly indicate why it is that so many of our patients are advanced cases when the diagnosis is made, and it is often not the fault of the physician, or even the patient himself, that for a time the trouble is not recognized. It is, therefore, of the utmost importance that the public be instructed that tuberculosis is often acute in its onset, and as such must be carefully studied to differentiate it from other acute or subacute respiratory conditions. Furthermore, a careful study of the localization and type of lesion will show that the apical lesion small in extent is very often a healed lesion and after a short observation, to rule out any active symptoms, the patient with such findings may be quickly restored to his work, instead of being carried indefinitely as a tuberculosis patient who goes out eventually to fatten the percentage of arrested cases as a result of treatment. A careful study by Fishberg recently published bears out the fact that the apical lesions are relatively benign.

DIAGNOSIS

The diagnosis of pulmonary tuberculosis is not a spectacular procedure, but must rest on the ability of the diagnostician to patiently apply a few simple procedures, which may be grouped as follows:

1. A careful history of the illness.
2. A complete physical examination.
3. X-ray.
4. Sputum examination.

A brief elaboration of these points may be of value:

1. The history of the illness should stress the nature of the onset, the duration, any previous attack, and any record of exposure to the disease tuberculosis. The nature of the onset has been sufficiently discussed already.

2. The physical examination may be disappointing, revealing very few signs, but may, if there is marked trouble, reveal the signs of broncho-pneumonia in the infraclavicular or mid-lung regions. The location of the lesion may give some altered breathing and even rales in the apex, purely from altered aeration of the apex. Rales when found are moist in type, tending to be moderately coarse with progressions of the lesion. In short, the finding of physical signs indicating a lobular pneumonia must call for the ruling out of

tuberculosis, especially when the signs are infraclavicular in location and are slow to disappear.

3. X-ray. The diagnosis of tuberculosis is incomplete without an X-ray of the chest. Indeed Webb, of Colorado Springs, is quite right when he states that "Roentgen examination is the only method available for detecting early pulmonary tuberculosis". The X-ray will ordinarily reveal a fairly dense shadow of varying size and irregular outline, with or without mottling, suggesting an exudative infiltration. This may be located in the infraclavicular region, the mid-lung, or, at times, the base. Sereal roentgenograms may show this lesion to rapidly extend and that excavation may occur. There may be absorption and disappearance of the lesion also occurring quickly. There should be more use of the X-ray, no questionable chest condition has been completely examined without it.

4. Finally the sputum must be carefully examined, not once, but several times. Many times this will complete the diagnosis. Too little significance has been given to systematic sputum analysis. Some special laboratory test for the diagnosis of pulmonary tuberculosis is always being sought, but after all what more accurate test can there be than careful sputum analysis? As proof of the value of such tests, Pinner and Werner found during one year's admissions to the Maybury Sanatorium 68 patients with pulmonary findings who had negative sputum. Repeated studies showed tubercle bacilli to be present in 32 of these. A careful clinical check of the remaining 36, who unquestionably had tuberculosis, revealed that all but five could be classified as arrested or quiescent cases. There were 585 patients with five showing active symptoms and negative sputum. This is seen to be less than one per cent error. There are few, if any, laboratory procedures subject to less error than this. The diagnosis is to be thought of in every case of respiratory disease where a clear cut diagnosis has not been made, and if tuberculosis is thought of and ruled out if possible, many more early cases may be uncovered when they are more suitable for successful treatment.

TREATMENT

It is well recognized that tuberculosis can be successfully treated if not advanced too far. These cases of infraclavicular lesions are at once a very dangerous and a very benign type; dangerous because they may progress rapidly to excavation and extensive involvement by spreads, and benign

because they may clear by absorption with very little permanent damage.

With the wide use of collapse therapy and its splendid results, it is exceedingly important that these cases be recognized early when disease is still localized to a portion of one lung when such procedure can be most successfully applied.

The very small lesion with no evidence of cavity formation may be tried on bed rest for a short time, and if clearing occurs promptly this may be sufficient. However, careful observation should be maintained for the first indication that regression of the lesion is not taking place when some form of collapse therapy should be indicated, phrenic nerve surgery, pneumothorax or both.

If cavity has already occurred and the lesion is predominantly unilateral then no time should be lost in resorting at once to collapse therapy, which together with bed rest offers the best hope of recovery.

Without going into extensive detail as to indications for the various forms of collapse therapy suffice it to say that the treatment of tuberculosis has become much more active, and the type and location of the lesion is all important in deciding the method of therapy to be followed.

SUMMARY

1. Pulmonary tuberculosis is often acute in its onset, probably at least one-half of the time.

2. The development of advanced disease is often a matter of only a few weeks or months at best.

3. The acute forms are characterized by an exudative infiltration, sub-apical in location.

4. The truly apical lesion tends to be benign and represents a healed fibrotic lesion.

5. The diagnosis rests on history of acute respiratory onset, physical findings suggesting broncho-pneumonia, X-ray films showing a sub-apical lesion and often positive sputum.

6. It is important that the acute onset of tuberculosis be recognized by the patients and physician for in these cases time is all important if successful treatment is to be instituted.

Dr. Max Pinner and Dr. Ben Wolepor collaborated in this study and should receive equal credit.

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DISCUSSION

Dr. George McKean, (Detroit): I think the work of these gentlemen of Northville is just wonderful. They are doing it as nobody else I have ever seen recorded is doing. I have watched their work for these last two years, and it has revolutionized my notion of tuberculosis.

Dr. W. H. Marshall, (Flint): We hear a good deal about the failure of the profession to recognize early tuberculosis. Much of the criticism is unjust. For a number of years I conducted a tuberculosis clinic in an industrial city and I arrived at one very important conclusion, namely, that the working man does not have time to have incipient tuberculosis; that is, due to economic stress he cannot afford to quit work, cannot afford to come to his doctor and consequently by the time the physician sees him, whether in the office or the clinic, the case is no longer incipient tuberculosis. I think there has been very much unjust criticism of the rank and file of the profession for their failure to recognize incipient tuberculosis.

Dr. Douglas has given an admirable review of these acute cases. There is one other phase of acute pulmonary tuberculosis that I should like to mention, a phase that has a medico-legal importance at times. I recall a young soldier who received an abdominal injury during the war, was admitted with a fever and was found to have a very active tuberculosis. It was fulminating, and he died. On postmortem it was found he had had abdominal tuberculosis in childhood. He had caseous lesions which the trauma had activated. So, too, I have seen following crushing wounds of the chest an active pulmonary tuberculosis. One might postulate that there, too, latent caseous glands might be ruptured that flood the bronchial system and start up an acute tuberculosis.

Dr. Conrad George, (Ann Arbor): I am troubled with the impediment of not hearing anything of these papers except the word tuberculosis. That is all I could get out of it. So I am not in position, indeed I have not the capacity, to discuss these papers that have been prepared with great care. The present literature on this subject is so vast that an ordinary man would require 48 hours in the day to read a little of it to see what is going on.

Now, there are things in tuberculosis that are beyond man's comprehension at the present state. I have laid down in this Society a paper that was read shortly after Koch had demonstrated the isolation of the tuberculosis bacillus. I had a patient, a farmer's wife, nearly 70 years of age who had history of consumption in the family. All her descendants had it markedly, and she supplied the bacteriological laboratory which was first instituted in Ann Arbor with sputum for every student, and the germs were just as numerous as snow flakes. All the care this patient had was from a 14-year-old daughter who did the cooking on her large farm, and under what I thought was the Cervello treatment the woman recovered perfectly and lived to be 96 years of age. She was in the sixties when I treated her and weighed below 90 pounds. She went up to over 200 and lived to 96 years of age. So I think that was some treatment. This case was laid down in the annals of this Society nearly 50 years ago. Vaughan had the sputum in the laboratory for years, and at one meeting of the Society he acci-

dentially asked, "George, what has become of your lady?" I told him she then weighed over 200 pounds.

The injection treatment, or 606, is considered just as much a failure today in preventing secondary and tertiary lesions of lues. That is recognized in Germany just the same as the treatment of the Copenhagen doctor. Those things are going even though they are pretty new.

There is at present a treatment in vogue in Germany that I wish to bring before some of you. We have some cases left because the state board of health takes all these cases away from the general practitioner. (Laughter). We may have a case now and then.

The treatment is very simple, so simple that it will strike you with such simplicity as to shake it off, but it is so simple you had better try it. That is the daily injection which they used to use in the old treatment of lues before 606 came in, potassium soap but not in liquid form. They used it in the semi-liquid form and rubbed it over the body. They dipped the hands in hot water and rubbed it in until it disappeared.

When I first saw that statement, I compared it with another statement from another specialist in skin diseases. I read an article by someone who uses nothing but the potassium soap bath in treatment for all forms of skin diseases, and after 30 years he has been trying to put it down as the best treatment in all skin diseases, generally. That is soft soap. (Laughter).

Dr. A. B. Wickham, (Detroit): I should like to add my word of appreciation for Dr. Douglas' paper. I should like to ask the doctor, in his closing discussion, whether he had in mind the shortened duration of infection or was he simply dealing with Perthes' disease? It was my impression that he did not refer to the close or near date of infection but that infection might have occurred a number of years ago. I do believe, however, that many of these cases that had a sudden onset of disease might have had infection many years before and then had a sudden flare-up.

I believe in the doctor's address this morning he has explained some of the reasons why we get these sudden onsets. When we stop to realize today we know that the disease is progressing in the adolescents, those of high school age. It is increasing, instead of decreasing, among the high

school girls and boys. I believe, as he has spoken in his paper, that is due to the stress of social life during the athletic physical training, the pressure of high school life today. We are getting a great many diseased boys and girls who are supposed to be perfectly healthy.

Recently, at our Atlantic meeting, the head of Phipps Institute demonstrated that the high school boys and girls of Philadelphia are showing a definite increase, 2 per cent, who are supposed to be healthy, of early active disease. Also in Minneapolis, the schools there have shown the same condition.

Most of these cases are of a sudden onset. Then, again, we get the strain of early married life, motherhood, and the strain of home life among the male population.

Another point is one the doctor brought out: When should we expect the disease? I think we as practitioners have this acute sense of observation. There is something about the tubercular case of which it is true to say, "He made a diagnosis from the door to the bed." You make that quick observation sometimes just from the patient's personal appearance when he comes into the office. There is something about the pallor, the waxy expression of the tuberculous patient which marks it as against the hectic type of toxemia. Our public health nurses can observe these patients. I do believe, certainly, that the acute onset is becoming more and more prevalent if you look for it. There is one point that I feel has been stressed. (I am not just in accord with it altogether), and that is that the diagnosis can be made first by the X-ray. I certainly believe you have to have scar tissue in order to show a shadow on an X-ray film, and these patients can be diagnosed, I think, long before by early signs.

Another point is that the disease starts on one side and becomes inactive, and then it will flare up on the other side and spread.

Dr. Bruce H. Douglas, (Closing discussion): In answer to Dr. Wickham's question, I should say I didn't attempt at all in this paper to analyze the matter of infection. I merely meant to deal with the manifest disease pulmonary tuberculosis. I agree that infection probably occurred in most instances year ago and that it is only the manifestation of the acute onset of the disease that is here described.

AJINOMOTO

Whenever protein is eaten, it is hydrolyzed by the digestive juices and a mixture of some twenty amino-acids is produced and subsequently absorbed. In spite of the fact that this is a familiar biochemical reaction so common as to excite little notice, the laboratory production of pure crystalline amino-acids is accomplished only with difficulty, so that these compounds are listed as rare chemicals and are usually found only in research laboratories. Recently attention has been called again to the fact that the acid sodium salt of glutamic acid, an amino-acid occurring in proteins, is made in large quantities for food purposes in the orient. It was discovered in Japan that this salt has a decided meatlike taste. The use of meat in the diet is condemned by Buddhists and, instead, shavings of dried fish were added to many of the Japanese dishes to improve the flavor. With the advent of monosodium glutamate in commerce, this condiment is said to have become as common in Japanese cookery as was salt or sugar. It is called "Ajinomoto," or "the

element of taste." The Chinese have become large users of this material, the great number of vegetarians among them creating a demand for it. This condiment has also been used to displace the more expensive chicken and meat extract formerly used to impart taste to their dishes. Monosodium glutamate is made by hydrolyzing gluten or soy bean by hydrochloric or sulphuric acid. The manufacture began in China about eight years ago and Han states that the value of this chemical made in China in 1928 was \$630,000 and that \$500,000 worth more was imported from Japan. The export of this material from China to the Philippines, Dutch East Indies and Singapore has become a trade of considerable magnitude. While the cost of glutamic acid in this country is about \$15 for 100 gm., the price of Ajinomoto is from \$2 to \$3 a pound. The exigencies of religion, of racial food habits and of economics have transformed what in this country is a rare chemical to a common article of food among the oriental nations.—*Jour. A.M.A.*, Nov. 30, 1929.

MODERN METHODS OF TREATING PROSTATIC OBSTRUCTION*

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Only a few years have elapsed since the treatment of prostatic obstruction consisted entirely of immediate relief of the obstruction by prostatectomy. Today prostatectomy represents only a part of the treatment instituted in the relief of prostatic obstruction and unfortunately may not always be employed in all forms of prostatic disease.

Malignant disease of the prostate gland at The Mayo Clinic comprises 15 per cent of the obstructive lesions in the prostatic age, as differentiated from infections of the gland of comparatively young persons, whereas adenomatous hypertrophy and fibrosis of the gland are encountered in about 85 per cent of the cases.

A consideration of the treatment of malignant disease of the prostate gland is a subject in itself; however, as it is my purpose to devote most of my time to commenting on methods of dealing with the benign, operable type of obstructing lesion, the malignant lesions will be considered only briefly.

The malignant lesions, I believe, in general are more insidious and usually do not produce symptoms of obstruction of the vesical outlet early, and in consequence are often well advanced when the patients first present themselves to the urologist or surgeon. Advance of the disease is usually characterized by invasion of the capsule, seminal vesicles and periprostatic tissues as determined by digital examination of the gland, and the presence of metastasis to the bones of the pelvis and spine or to the lungs, as depicted in roentgenograms. When such manifestations of advanced malignant disease are present the condition is clearly inoperable from the standpoint of cure, and it is also unsuitable for the application of physical agents. Practically the only time a malignant lesion of the prostate gland can be considered truly operable is when the capsule and seminal vesicles are not invaded, there is no demonstrable metastasis, and the diagnosis of a malignant lesion cannot be made with any degree of certainty, or when the lesion proves to be malignant at the time of prostatectomy on a preoperative diagnosis of benign prostatic hypertrophy. Certainly few cases may be truly considered within the realm of operability when a definite clinical diagnosis of carcinoma of the pros-

tate gland can be made. There are few adherents to the so-called radical operation, curative in purpose, once a diagnosis of carcinoma is established.

A word of caution is necessary regarding the accuracy of diagnosis. The stony hardness of a gland and the irregularity sometimes encountered within the gland and confined within the capsule may lead one to the conclusion that a malignant lesion is present, and usually this is true; however, without roentgenologic examination of the prostatic area in doubtful or questionable cases the possibility of prostatic stones cannot be excluded. Prostatic calculi sometimes attain considerable size and may lead to error in diagnosis. Likewise a gland of firm consistence which presents signs and symptoms justifying the strong suspicion of a malignant lesion may prove to be entirely benign at operation. It has been my practice to advise surgical exploration of the gland in cases in which the diagnosis is doubtful, and in absence of periprostatic involvement or metastasis. Each year at The Mayo Clinic about 6 per cent of the prostate glands removed are malignant, but in practically all instances the prostatectomy was undertaken on a preoperative diagnosis of benign prostatic hypertrophy. For the most part, in fully 75 per cent of the cases in which the clinical diagnosis is unquestionable, treatment is simply palliative.

For obstruction and retention of urine suprapubic cystostomy affords relief. Partial prostatectomy for relief of obstruction is seldom justifiable, for although the urethral channel may be opened temporarily, occlusion usually soon recurs. However, Chute has recently reported his experiences in the treatment of carcinoma of the prostate gland and has had occasion to repeat partial prostatectomy with gratifying palliative results. Isolated instances have been noted in which radiotherapy has brought about shrinkage of the gland and retardation of growth but in general the

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physical agents have not been productive of much palliation in cases of true carcinoma of the prostate gland.

Many problems present themselves in the treatment of benign prostatic hypertrophy. The prostatic age may be considered as embracing the years after fifty. Occasionally true adenomatous hypertrophy with partial obstruction at the vesical neck is encountered before the age of 50, but for the most part it may be considered a disease of degeneration, although the pathologic processes in the benign lesions are not necessarily degenerative. Some time ago I reviewed records of 1973 cases at The Mayo Clinic in which prostatectomy had been done. In this series the average age was slightly more than 63 years, but there were almost as many patients who were aged more than 65 as there were less than that age. Although the average mortality rate for the series was 5 per cent, the mortality rate for prostatectomy in patients aged more than 65 years was 6.3 per cent as compared to 3.9 per cent in patients aged less than 65 years, or nearly twice as great. Furthermore, the mortality rate was found to rise rapidly after the age of 70, and to attain about 17 per cent at the age of 85 years. It is readily apparent that the degenerative processes in vital organs, particularly in the cardiovascular and renal systems in the aged patient, exert a profound influence on mortality, and these contribute materially to the problems associated with the successful management of prostatic obstruction.

In the evolution of methods of treating prostatic obstruction certain principles have become definitely defined. Experience has shown that without preoperative preparation a patient may not be operated on for the removal of an obstructing prostate gland with the maximal degree of safety. Also a patient may not be operated on with the maximal degree of safety until stabilization of the renal function has been established within or approximating normal limits. Furthermore, individualization is necessary; routine measures cannot be safely adopted and all patients cannot be treated preoperatively or surgically by the same methods and surgical procedures.

In the treatment of benign prostatic obstruction the aim is to restore function and at the same time preserve life. Modern methods of prostatectomy for obstructing lesions of the prostate gland are highly satisfactory for the restoration of function; however, the preservation of life under the circumstances of prostatectomy

presents many problems, chiefly because of the presence in many instances of associated organic disease coincident with prostatic obstruction, and the hazards of surgical procedures in patients in the prostatic age.

As prostatic hypertrophy develops and mechanical obstruction occurs at the vesical outlet, usually not suddenly, but with progressively greater difficulty in voiding and emptying of the bladder and interference with the normal function of the bladder, back pressure on the kidneys occurs with resultant injury to renal function. Cardiovascular changes are practically always present in the prostatic age and these tend to become more pronounced after prolonged urinary difficulty has caused renal insufficiency, and the result may be the so-called cardiovascular-renal syndrome so often encountered with prostatic obstruction. In other words, unquestionably a reduction of the cardiovascular-renal reserve has occurred which affects all vital functions of the body. In the case of prostatic obstruction there is not only mechanical obstruction at the neck of the bladder, but there is impairment of all bodily functions. In the light of present knowledge of the cause and effect of such disease it is not reasonable to assume that the patient is in a state of adequate organic reserve to withstand, without considerable risk, the insult of a major surgical procedure or that recovery in all cases will immediately follow surgical removal of the prostate gland.

In certain cases of prolonged prostatic obstruction irreparable injury has occurred to vital organs, and never by adequate management may the patient be brought to a state of health whereby prostatectomy may be undertaken with any degree of safety. However, in the majority of instances, preoperative treatment results in the restoration of bodily functions within a normal state or approaching it, so that operation may be undertaken with a reasonable degree of safety.

Facilities are at hand for the relief of urinary retention and back pressure on the kidneys and for stimulating return of function to the renal apparatus within its organic capacity (the extent of which is dependent on whether or not irreparable injury has occurred), and coincidentally reducing the cardiovascular stress, with general improvement in bodily functions. For the relief of urinary retention and back pressure on the kidneys, an indwelling urethral catheter is preferred; immediate suprapubic cystostomy should be reserved as

a procedure of necessity only in those cases in which the urethra is impassable to the catheter. Even though conditions may be such that the divided or two-stage operation is subsequently decided on as the operation of choice or necessity for actual removal of the gland, gradual decompression is usually best instituted by the indwelling urethral catheter preliminary to the cystostomy or first stage of the two-stage prostatectomy. Stimulation of renal activity is best accomplished by increasing body fluids. As Bugbee has said, water is the best drug; if necessary it should be given by rectum, subcutaneously, or, still more effectively, intravenously. Except in cases in which there is marked impairment of the kidneys, renal function rapidly improves after drainage of the bladder and the administration of adequate amounts of water. During this period of preoperative management the case may be considered largely medical, and the surgeon and urologist may advantageously honor the valued co-operation of the internist. His observation of the patient and interpretation of clinical and laboratory data pertaining to the cardiovascular-renal and other vital organic functions has in recent years contributed much to the preservation of life in these cases.

The length of time these preliminary measures are necessary before prostatectomy may be done depends on how rapidly response has occurred in increasing organic reserve. The renal functional tests, the status of the cardiovascular system, and the general condition of the patient, all require consideration in determining the time and method of operation. The blood urea and the estimation of phenolsulphonaphthalein return are indispensable and of greatest value when repeated at frequent intervals and interpreted in their relation one to the other. The information obtained from tests of renal function provides only a relative, not an accurate, estimate of renal function. Phenolsulphonaphthalein has proved of greater value in recent years through the employment of the fractional method of collecting the urine every 15 or 30 minutes after its administration, and noting the time of appearance and the rapidity with which the dye is excreted. The amount of dye excreted at the end of two hours is of secondary importance. Delayed excretion, even though excretion is adequate at the end of two hours, is indicative of incomplete stabilization, and delay and low percentage of excretion at the end of two hours denotes

poor renal function, as does persistently high blood urea. To my knowledge a test is not available which measures renal reserve. Sufficient renal function has been present to provide normal values in the functional tests in cases in which uremia has been known to develop rapidly after operation; in such cases renal reserve was counted on because of the normal functional tests, which in reality did not exist. It may be stated as a general working rule, so far as the functional tests are concerned, that delayed excretion of phenolsulphonaphthalein with a total output in two hours of less than 20 per cent, and blood urea of more than 50 mg. for each 100 c.c., should cause one to consider the situation most carefully before recommending prostatectomy with a legitimate degree of safety. Stabilization of renal functional tests within normal limits is most essential. So far as the cardiovascular system is concerned, malignant hypertension and cardiac decompensation present practically the only contraindications to prostatectomy, assuming that with other forms of cardiovascular disease the tests of renal function and the general condition of the patient are satisfactory. Great improvement of impaired cardiovascular states has been noted after drainage of the bladder and restoration of renal function, with general improvement of the patient. Electrocardiographic studies in conjunction with clinical observation provide relatively accurate methods of determining the capacity of the heart to withstand operation, and the internist may accomplish much during the preoperative period of treatment. Even though the tests of renal function and the condition of the cardiovascular system seem satisfactory, it is important that the patient's general condition also should be satisfactory. Vigor, strength, good appetite, and so forth, are essential. During the period of catheter drainage every effort should be made to stabilize bodily function.

Lesions of the urinary tract are often associated with prostatic obstruction, and during the period of observation roentgenologic examination may disclose stones in one or the other kidney, ureter, or bladder. At The Mayo Clinic stones in the bladder are associated in 10 to 12 per cent. Likewise diverticula of the bladder varying in size from a capacity of 30 c.c. to that of the bladder are associated in 5 to 7 per cent. The presence of diverticula may be ascertained by cystoscopic examination or cystogram, preferably the latter unless some contraindication exists. Cystoscopic

examination in the presence of surgical prostatic obstruction is not without its hazards, and it is best that it be most discriminately employed. Unless one cannot determine by other methods the absence or presence of suspected associated lesions, and cannot be certain that prostatic enlargement is responsible for urinary retention, pyuria, hematuria, and so forth, a cystoscopic examination may well be reserved for the doubtful cases rather than making it as a routine in all cases. If multiple or large stones are associated and there is considerable cystitis, or if there are single or multiple surgical diverticula, they are usually best dealt with at a primary operation, and not simultaneously with prostatectomy.

Causes of death following prostatectomy in order of frequency are uremia, hemorrhage and general sepsis. The preoperative measures instituted in modern methods obviate postoperative uremia to a large extent and have resulted in marked reduction in mortality from this complication; however, uremia still is a hazard because of inability to estimate renal reserve by any method. Drainage of the bladder and improvement in operative and postoperative methods have markedly reduced the incidence of general sepsis as a cause of death; however, it still occurs. Death from hemorrhage may occur early or late postoperatively. It is well known that patients with disease of the prostate gland do not stand loss of blood well, probably because of the ease with which the stability of bodily function may be disturbed by virtue of age or low organic reserve through loss of blood volume and disturbance of blood pressure. In the prostatic age the resiliency of the circulatory system and the powers of accommodation to marked reduction of blood volume and disturbance of blood pressure are reduced. Large massive operative or postoperative hemorrhage rapidly results in inhibition of renal function and, even though blood is replaced by transfusion, death may occur, if not immediately, 24 to 72 hours later. Inadequate control of operative bleeding may, by continued loss of blood during the course of several days, so deplete the patient and reduce resistance to infection that general sepsis occurs, to which death may be attributed but which in reality was precipitated by loss of blood.

The requisites for a satisfactory result following prostatectomy are complete removal of the obstructing lesion, accurate hemostasis, and adequate urinary drain-

age. In the hands of those qualified in the respective methods I believe that results are equally good and the mortality equally low whether the operation is performed by the suprapubic or the perineal route. However, I am certain that unless the operator is particularly trained and adept in performing the perineal operation his results will be better by the suprapubic route. Whether the suprapubic operation should be done in one stage or in two stages is largely dependent on the conditions under which the surgeon works, the method he prefers, and in which he believes he obtains the best results, and lastly on the condition of the patient. I consider the one-stage suprapubic operation the one of choice and the two-stage operation the one of necessity.

To remove the prostate gland simultaneously with a good-sized diverticulum or at the time that large or multiple stones are removed in the presence of considerable cystitis subjects the patient to unjustifiable risk, and it has been my practice under such conditions to reserve prostatectomy for a second stage. Likewise about 6 per cent of patients are intolerant to an indwelling urethral catheter and in order to provide necessary drainage preliminary cystostomy is required. The aged, who are feeble and whose organic reserve is at low ebb, withstand the divided operation better, or at least the preliminary cystostomy serves as a test of organic reserve. In many instances the cystostomy is as serious a procedure for the patient as prostatectomy, not because of the magnitude of the operation, but because of the condition of the patient at the time cystostomy is performed. Cystostomy is not without risk. Lowsley recently reported a large series in which it was done for prostatic obstruction with a mortality of 8 per cent. During 1928 at The Mayo Clinic in a series of 125 cases in which simple cystostomy was done for benign prostatic obstruction there were five deaths, a mortality rate of 4 per cent.

In the absence of any of the foregoing indications for the two-stage operation of necessity, it is preferable to prepare the patient for the one-stage operation by a permanent indwelling urethral catheter. In the one-stage visualized operation the obstructing lesion can be removed completely, leaving a clean prostatic capsule, smooth circumference of the neck of the bladder, free of tags, bars, and so forth, and facilitates accurate hemostasis, in a manner of thoroughness which is not approached by

the blind two-stage operation of necessity. The formation of stricture is rare, wounds heal early, and for the most part convalescence is uncomplicated. Operative hemorrhage in most cases is adequately controlled by suture of the neck of the bladder, as advocated by Cabot, and the use of the Pilcher bag in the prostatic capsule.

The elimination of general anesthetics in recent years has contributed much to the safety of prostatectomy. Sacral anesthesia, supplemented with abdominal field block, for the suprapubic operation has proved most satisfactory. In recent months I have used spinal anesthesia with control of blood pressure by ephedrine; relaxation and anesthesia have been gratifying, and there have been relatively few reactions. Ephedrine control of blood pressure has materially increased the safety of spinal anesthesia in this field of surgery.

In general, postoperative measures are instituted as indications arise. The free administration of fluids is essential, adequate urinary drainage is readily maintained when operative hemostasis has been accurate, and the urine is clear immediately after operation. Blood-tinged urine and blood clots indicate inadequate hemostasis and interfere with proper postoperative drainage of urine. Complications occur occasionally under most adequate preoperative preparation and skillful surgery, for a major operation has been performed at an average age approximating closely the allotted three score and ten.

Postoperative epididymitis may be obviated by division and ligation of the vas deferens; this is a procedure which has been adopted by many as a routine before the institution of catheter drainage. In

the one-stage operation ligation of the vas is readily accomplished at the external inguinal ring through the median-line incision at the time of prostatectomy and I believe is a justifiable procedure for most patients beyond the age of 60 or 65. As yet I have not felt justified in adopting it in all cases.

Mortality cannot be entirely avoided; however, modern methods of management have resulted in a marked reduction of the hazards. Formerly when tests of renal function were unknown, when the effects on the vital organs and functions of the body of urinary retention were not recognized, and while work in prostatic surgery was in the pioneer state, the mortality was largely in the hands of the surgeons. Today, with the knowledge of cause and effect of urinary retention, with methods at hand of relative determination and measurement of organic function, with well defined principles of treatment, and with accurate operative methods, the responsibility for a mortality rate in excess of 5 per cent rests largely with the patient. There are not many complications that warrant delay of prostatectomy once benign prostatic obstruction has developed. The effects on the function of vital organs of prolonged prostatic obstruction and urinary retention are well known, and the end result is so sure that operative relief should not be withheld until irreparable injury to the cardiovascular and renal systems has occurred. Only through the institution of modern methods of treatment after symptoms of prostatic obstruction have occurred may the patient be afforded the opportunity of obtaining a good functional result at a minimal risk.

INFANTILE PARALYSIS CURE IS METHOD OF PREVENTION

The best hope of curing the paralysis and serious crippling which follow an attack of poliomyelitis, or infantile paralysis, lies in early preventive measures, Dr. Lloyd W. Aycock of the Harvard Medical School declared in an analysis of the disease. This means that treatment must be begun before the nerve cells have been destroyed. Hence the plea physicians are making for early diagnosis of the disease. "The paralysis itself is due to the destruction of the nerve cells in the spinal cord which govern the movement of muscles," said Dr. Aycock. "When these nerve cells are destroyed, the muscle with which they are connected loses entirely its power to function. It is like a telephone which may be in perfect order itself, but which cannot function without a wire leading to it from the telephone exchange."

Once the paralysis has occurred, it is too late to cure it, although patient treatment and care

and exercise can do much for the affected muscles. The paralysis is practically always preceded by certain definite symptoms. It is during this preparalytic stage, before the nerves have been destroyed, that there is a chance of cure. The onset of the disease is usually abrupt, with fever, headache and stomach and intestinal upset and the child is drowsy and wants to be let alone.

The child is usually more prostrated than usual with the degree of fever, which is generally not over 102 degrees Fahrenheit. An anxious expression of the face, tremors and twitchings of the muscles and a sort of uncertainty in movement of the arms and legs are characteristic of this disease in the early stages.

The most suggestive sign is stiffness of the spinal column and neck. The latter will be held rigidly and often the child cannot sit up comfortably without propping himself up on his arms. —Science Service.

SPONTANEOUS ENTERO-ANASTOMOSIS OF ILEUM AND JEJENUM— REPORT OF CASE*

PAULINE BEREGOFF, PH. G., M. D.
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A careful search of literature has shown only two cases of spontaneous entero-anastomosis reported. Brash** reported a case of spontaneous exclusion of cecum in a girl of 21 years. The symptoms were of intestinal obstruction indicating surgical intervention. In the same report he relates about a similar case observed by Pullman. Spontaneous entero-anastomoses, experimentally produced in rabbits, were reported by Belzeller and Szillard†. Our case is of interest because it differs from the other cases on record, by the fact that we did not suspect to find pathology along the gastro-intestinal tract when the patient died, and that the entero-anastomosis, incidentally found during a post mortem examination, existed for some time, presenting healed lesions at the areas of anastomosis.

CASE REPORT

W. D., aged 62, was admitted to the State Hospital, September 1904, suffered from convulsions, diagnosed to be of epileptic form. His physical condition at the date of admission was good. Within a short time of rest, the convulsions disappeared but the patient remained at the hospital to do light work. Occasionally he would complain of gastric disturbances, diarrhea alternating with constipation with some abdominal pain, but as he did not appear to suffer considerably, not much attention was given to the complaints. In 1925 he had a slight stroke with the result of

systolic and 100 diastolic. He stayed in bed for several months, never regaining complete use of left arm and leg, but was able to do light work. December 10, 1928, I saw the patient for the first time, when he was admitted to the surgical ward complaining of severe pain in the right upper abdomen. He had a slight elevation of temperature, white count 1200 with a polynuclear count of 82 per cent. The red count and hemoglobin

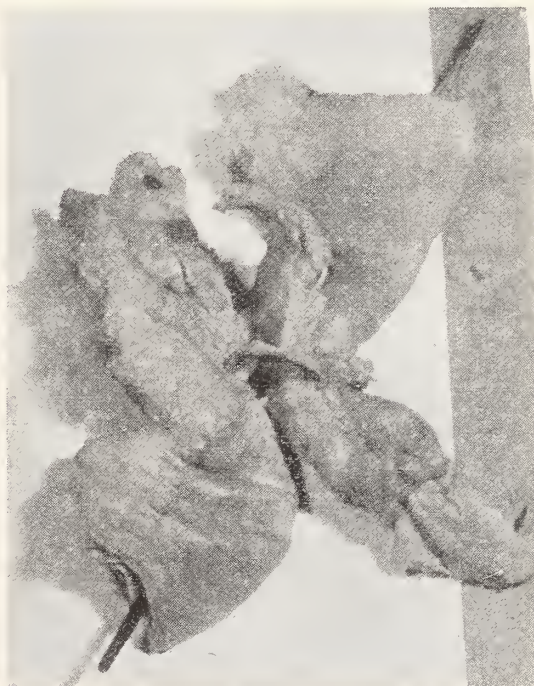


Figure 2

Spontaneous Entero-Anastomosis of Ileum and Jejunum



Figure 1

Spontaneous Entero-Anastomosis of Ileum and Jejunum

a partial paralysis of the left side. He had a moderately enlarged heart with a slight systolic aorta murmur. The pulse was irregular but of good volume. The blood pressure was 200

were normal and the Wassermann ++. On physical examination, a very much enlarged heart was revealed with a marked systolic aortic murmur. The man was robust. Within several days he started to run a septic temperature and presented typical symptoms of a cholecystitis. The white count ranged between 30,000 and 38,000. The Van-Den-Bergh was directly positive and the blood culture showed bacilli with cultural characteristics of *B. Coli*. The surgeons in consultation advised against operation as they suspected an aortic aneurism. The patient apparently showed improvement under medical treatment until January 6, 1928, when he complained of sudden severe pain throughout the abdomen, vomited several times and died the next day. A partial post mortem, comprising the abdominal cavity, was permitted.

* From the Department of Pathology of the State and General Hospitals, Traverse City, Michigan.

**Brash: Spontaneous Exclusion of Cecum. *Med. Klin.*, 22: 1956-1957, December 17, 1926.

† Belzeller, L. and Szillard, Z.: Spontaneous Entero-anastomosis. *Wien. Klin. Wchnschr.*, 35:1006-1007, December 28, 1922; *Ab. J. A. M. A.*, 80:735, March 10, 1923.

POST MORTEM

A well developed and nourished man of about 65 years. The face and entire body showed a marked icteric tinge. Pupils were equal but cloudy. Teeth in very poor condition. The vessels of the neck were extremely dilated and showed marked sclerotic changes. The chest very well developed. The abdomen distended and rigid. The extremities presented moderate edema of the ankles. On opening the abdomen, the peritoneum was found adhered to the omentum that walled off the ascending colon, stomach and gall-bladder. It was also greatly adhered to the omentum that walled off the ileum. A large amount of pus, of colon color, filled the abdominal cavity in the region of the gall-bladder. The gall-bladder was phlegmonous, ruptured and the liver showed areas of necrosis. The stomach presented no evidence of pathology. The peritoneal adhesions were carefully dissected from the omentum that covered the small intestines. The adhesions appeared to be of long duration. A coil of the ileum was found connected with one of the jejunum forming a lateral entero-anastomosis. (Fig. 1). Although the ileum showed a stenosed lumen of 3 m.m. in diameter, yet there was free connection between both parts of the intestine. (Fig. 2). Sections that were taken from the areas of anastomosis, presented chronic inflammatory changes and a great deal of scar tissue. Many sections were examined from different areas of the intestinal tract, all showing some chronic inflammatory changes at different areas of the sec-

tion. There was no evidence of tuberculous infiltration nor malignancy. Cultures of the pus from the gall-bladder showed *B. Coli*. The heart was examined by penetrating the diaphragm. The organ was large, firm, and showed marked arteriosclerosis of the aorta but no aneurism. The kidney and spleen showed old infarcts, the spleen was converted into a fibrous tumor. All organs showed inflammatory changes.

Undoubtedly our patient had suffered from an enteritis for some time, and an ulcerated area of the ileum or jejunum that was walled off by omentum, came in contact with the other coil of the intestine, which was probably inflamed, forming an anastomosis. It is most probable that this condition existed a long time and that the cause of the convulsions was due to intestinal toxemia instead of epilepsy. That the condition of the gall-bladder is to be attributed to an exacerbation of a chronic inflammatory process that existed in the organ since the intestinal infection and that the cardiac condition was of the same cause.

NOTE: I wish to thank Dr. G. F. Inch, the superintendent of the hospital, for his permission to study up this case.
—P. B.

EXPERIMENTAL STUDIES OF THE COMMON COLD

The "common cold" has several characteristics that lead to its classification as an acute infection of the upper respiratory tract. Consequently, many efforts have been made to isolate and identify the etiologic agent—obviously desirable steps in the attempts to master an unquestionably disastrous human malady. The study of the flora of the upper respiratory tract in conventional ways during health and disease has led to the isolation of a considerable number of familiar bacteria, but on the whole the results have not been sufficiently specific to permit the bringing of a charge of special responsibility against any of the identified microbial species. Investigations of this character are usually greatly facilitated by the discovery of an experimental animal in which the characteristic disease manifestations either occur naturally at times or can be produced at will in the laboratory. This is well illustrated in the history of the investigations of tuberculosis and anthrax, for example.

In the case of the common cold there are somewhat analogous disorders widely recognized among the domestic animals. However, such animal diseases as distemper in dogs and snuffles in rabbits, though having a certain resemblance to the human disease, have seemed in all probability to be too dissimilar from an etiologic point of view to be of immediate value. In a search for a type showing closer resemblance to the human disease, Dochez and his associates at the College of Physicians and Surgeons, New York, recently discovered that the "common cold" of man or something closely resembling it from a clinical standpoint apparently occurs among the anthropoid apes. There were indications, too, that such animals, while not under quarantine, have contracted upper respiratory infections presumably from chance human contacts. The symptoms

usually began with a discharge of mucus from both nostrils, accompanied by occasional attacks of sneezing. During the act of sneezing, considerable amounts of mucus were blown from the nostrils. Somewhat later the nares became obstructed and the breathing audible. In from three to five days a cough frequently developed, lasting sometimes as long as two weeks. In some instances the discharge of mucus became purulent and continued from one or the other nostril for as long as three weeks. There was some lassitude and loss of appetite and occasionally diarrhea. The temperature was seldom elevated and then only to an insignificant degree.

Thus given an experienced laboratory species susceptible to human "colds," the New York investigators have now demonstrated that filtered nasal washings obtained from human beings suffering with typical colds when injected intranasally into apes produced typical colds in about half of the instances attempted. In all positive experiments, gram-negative anaerobes of the type described by Olitsky and Gates were cultivated. However, etiologic significance was not assigned to these organisms. Control tests with washings of healthy persons were uniformly negative. In contrast with the changes noted in the positive transmission experiments there were no changes noted from the characteristic normal flora of their noses and throats. There was an entire absence of even small amounts of nasal mucous discharge following inoculation. The various observations thus collected seem, in the words of these most recent investigators of an admittedly difficult problem, to lead rather strongly to the assumption that the type of upper respiratory tract infection under consideration is caused by a filtrable virus.—Jour., A.M.A.

MEDICAL RETROSPECT AND FORECAST—1929-1930*

A poisonous sugar, the only sugar known that has a toxic reaction, was discovered in tuberculosis bacilli by Dr. R. J. Anderson, Yale University chemist.

A lifeless compound, extracted from mass cultures of tuberculosis germs, produced bodily changes like those of tuberculosis in experiments conducted by Doctors Florence R. Sabin, Charles A. Doan and C. E. Forkner, of the Rockefeller Institute for Medical Research.

Dried hog stomachs were discovered by Doctors C. C. Sturgis and Raphael Isaacs of the University of Michigan and Dr. E. A. Sharp of Parke, Davis & Co., to have the same effect in the treatment of pernicious anemia as the raw liver now widely used.

The Imperial Cancer Research Fund reported that they could find no connection between malignant growths and dietetic deficiencies.

A young woman physiologist with the unique respiration rate of three to four times a minute, instead of the usual fifteen to eighteen times a minute, was studied by Dr. Frances G. Benedict of the Nutritional Laboratory of the Carnegie Institution of Washington at Boston.

Pepsin, the digestive enzyme, was crystallized and isolated by Dr. J. H. Northrop of the Rockefeller Institute for Medical Research laboratories at Princeton, N. J.

Progress in studying and photographing in motion pictures the growth progress of cells and mammalian eggs was continued by the Department of Embryology of the Carnegie Institution of Washington at Johns Hopkins University in Baltimore.

Only 6 of the 40 species of *Anopheles* mosquitoes are important as carriers of malaria, Prof. Francis Metcalf Root of Johns Hopkins Hospital University discovered.

Prof. John J. Abel, who was the first to isolate pure crystalline insulin, made the discovery that only a part of the complex insulin molecule is necessary to combat diabetes.

That liver contains a substance which will reduce the concentration of sugar in the blood, as insulin does, was reported by Doctors Harry Blotner and W. P. Murphy of the Peter Bent Brigham Hospital, Boston.

Surgical control of Raynaud's disease was apparently attained by Dr. A. W. Adson and Dr. G. E. Brown of the Mayo Clinic.

During the winter of 1928-1929 there occurred an epidemic of influenza which, though mild as compared with the epidemic of 1920 and the pandemic of 1918-19, reached most of the countries for which mortality statistics are available.

An abnormally large number of cases of cerebrospinal meningitis occurred in the United States; the outbreak was traced to an origin in the Orient.

An outbreak of smallpox occasioned considerable alarm in England during the spring.

The work on the regular decennial revision of the U. S. Pharmacopoeia was begun.

Dr. Oliver Kamm, research director of Parke, Davis & Co., was awarded a prize of \$1,000 by the American Association for the Advancement of Science for his research in isolating the hormones of the pituitary gland.

The Nobel Prize in medicine for 1929 was awarded to Prof. Christian Eijkman of the University of Utrecht and to Sir Frederick Gowland Hopkins of the University of Cambridge for their researches on the vitamins.

Plans were made, committees formed and work begun on "the most sweeping study of child welfare that has ever been made in all the world", the results of which will be presented at the White House Conference on Child Health and Protection in 1930.

Dr. Joseph Goldberger, discoverer of the cause, cure and means of prevention of pellagra, died on January 17. His widow was granted a pension of \$125 per month by Congress.

* This article has been furnished The Journal of the Michigan State Medical Society by Science Service.

Mme. Marie Curie, co-discoverer of radium, visited America to attend scientific functions and to receive a gift for the purchase of a gram of radium for the Warsaw Cancer Hospital.

The International Society for the Prevention of Blindness was formed at a conference at The Hague in September.

A department of the history of medicine, the first one in this country, and the allied William H. Welch Medical Library were dedicated at the Johns Hopkins University.

The Wilmer Ophthalmological Institute of the Johns Hopkins University, the only such center in the country having its own building for treatment, research and teaching in diseases of the eye, was dedicated at Baltimore.

The narcotics division of the U. S. Public Health Service was established in February.

Report was made by Dr. Isadore S. Falk of the University of Chicago that he had isolated a group of micro-organisms that he believes were the causative agents of influenza during the 1928-29 epidemic.

A method of immunizing dogs against distemper by double inoculation was developed by Doctors P. P. Laidlaw and G. W. Dunkin of London.

Solution of problems of new diseases and also of some of the old, familiar ones are hoped for by medical scientists during 1930. The ever-widening extent of undulant fever, the threat of a meningitis outbreak, the increase of malaria and pellagra in the south will be subjects of study and investigation in laboratories and in the field during the coming year. Progress in the control of one or all of these is to be looked for, public health experts believe.

New and possibly radical methods of caring for children may be evolved by members of the various committees who will be making intensive studies of child welfare for report at the White House Conference on Child Health which will meet late in the year. The personnel of the committees includes outstanding leaders in every branch of the field, so that their concerted studies are expected to be of enormous value and significance.

Progress in pharmacy will be considerable, due to the decennial revision of the U. S. Pharmacopoeia which will take place during 1930. Marked and important changes in the character of modern pharmacy may also be expected. An increase is foretold in the number of purely professional pharmacies or chemists' shops, planned along the lines of the old-time ones with only such modern improvements as pertain exclusively to the practice of pharmacy.

In view of the earnest scientific effort being expended throughout the world in cancer research, progress will undoubtedly be made in this field, though it is perhaps too much to hope that the discovery of a "cure" will be made in the new year.

The Ransdell bill for the establishment of a National Health Institute will doubtless come up before Congress during 1930. Should this bill become a law, public health activities will take a big step with possibly far-reaching consequences.

A chemical reagent capable of detecting minute amounts of dread mustard gas in the air will probably be made during the coming year as a result of the competition sponsored by the International Committee of the Red Cross.

PREVENTING DEFORMITIES OF CHRONIC RHEUMATISM

Preventive medicine has accomplished much in the way of reducing the death and sickness rates of many common diseases, but a large field for further effort lies in the prevention of the crippling deformities of chronic arthritis, or plain ordinary rheumatism as it is known to the vast majority who suffer from it. The need for such preventive work is emphasized and methods described in a report made to the American Medical Association by two Boston physicians, Doctors Loring T. Swaim and John G. Kuhns.

"Correction is possible to a small degree at any stage of the disease," these doctors said of the deformities. However, they concluded as follows: "Correction never compares with the results of prevention, in our experience. Early protection in good position, and rest, with light normal use, are the only measures to prevent deformities in arthritis." The position during sleep is especially important, and the patient should rest in a position least likely to cause strain or contracture, the physicians explained. Motion should be encouraged but never forced. The best form of motion will be obtained by the patient's using the joint for normal purposes as much as he is able. One of the measures suggested for arthritis of the shoulder is as follows: The patient, when in bed, places his hands under his head with the bent elbows stretched out on the bed. This should be done for short periods several times daily.—Science Service.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., Commissioner
LANSING, MICHIGAN

COMMUNICABLE DISEASES IN 1929

Communicable disease figures for 1929 are still tentative and subject to correction with later reports, but they show interesting trends. There was a general increase of 1,095 cases reported during the year. The greatest increase was in scarlet fever. A total of 14,229 cases were reported in 1929 in contrast to the 10,312 of 1928, a gain of 3,917 cases.

The increase in meningitis, which reached epidemic proportions in some parts of the state, amounted to almost 1,600 cases. In all, 1,859 cases were reported during 1929 compared with 265 in 1928, and with a five year average of 156 cases. Smallpox also showed a gain of more than 1,000 cases, with 2,421 cases credited to 1929 and only 1,306 to 1928. The five year average for this disease is 1,726 cases. Syphilis showed an increase of almost 1,300 cases, and gonorrhea a gain of 908 cases.

The year 1928 was a peak year in measles, there being in excess of 26,000 cases reported. This was reduced to 18,000 in 1929, a decrease of almost 8,600 cases. Whooping cough also showed a decrease, and it is interesting to note that typhoid fever, which is regarded by many authorities as the one disease that may be considered the index of efficiency of sanitary control, showed a decrease of 74 cases. This was almost 20 per cent.

On the whole, the Michigan Department of Health had reports of 91,321 cases of communicable disease, not including the minor diseases such as chicken pox and mumps, during the year 1929. This compares not very unfavorably with the total of 90,226 cases for the same group of diseases in 1928.

It is interesting to note that there was an increase in the number of cases of tuberculosis reported, 6,248 in 1929 and 5,985 in 1928. This probably does not mean any increase in the actual number of cases that existed but only an increase in the efficiency of reporting under the new law.

The tabulated report follows:

REPORT OF THE PREVALENCE OF DISEASE
FOR THE YEAR 1929
Cases Reported

	December 1929	1929	1928	Average 5 yrs.
Pneumonia	495	7,439	7,373	5,937
Tuberculosis	544	6,248	5,985	5,654
Typhoid Fever.....	12	319	393	668

Diphtheria	481	4,562	3,821	4,743
Whooping Cough.....	424	9,332	9,793	7,632
Scarlet Fever.....	1,098	14,229	10,312	11,855
Measles	494	18,130	26,728	20,922
Smallpox	269	2,421	1,306	1,726
Meningitis	70	1,859	265	156
Polio-myelitis	9	183	75	242
Syphilis	1,131	16,606	15,323	14,739
Gonorrhea	634	9,661	8,753	9,953
Chancroid	26	332	99	119
Total	5,687	91,321	90,226	84,346

—W.J.V.D.

THE MIDLAND COUNTY HEALTH DEPARTMENT

On January first the new Midland County Health Department began operations, with Dr. D. E. Camp as health officer and Deborah Veneklasen as public health nurse. The department was authorized at the October meeting of the board of supervisors. Headquarters are at the Court House.

EXAMINATION OF TAXICAB DRIVERS

The law requiring the examination of all "drivers of motor vehicles used for the conveyance of passengers for hire" specifies that the certificate issued by the state commissioner of health shall be good for only two years. Since the law has been in effect for that length of time, re-examination of all such drivers is now necessary.

All members in good standing of county medical societies were designated by the state board commissioner of health as the official examining staff provided for by the law. Blanks for the examination may be secured from the Michigan Department of Health.

PREPARATIONS FOR THE NEW STATE HOSPITAL
FOR THE INSANE

A topographical survey of the 1,200 acres comprising the tract of land near Saline recently acquired by the state for a new state hospital for the insane is nearing completion. A staff of 10 men has worked for six weeks, and the survey findings will be ready for the architect as soon as the last work on the valley of the Saline River is completed.

MOUTH HYGIENE

Work in the Bureau of Mouth Hygiene is proceeding along the same lines as have been followed in previous years. Educational material is furnished to schools, public health nurses, and health workers in general. Emphasis is always placed upon the development of local resources

and local initiative, and the utilization of existing agencies.

As much time as possible is spent by the director in the field. From September 1st to December 31st the following places were visited: Berrien County, 100 per cent schools; Detroit (two meetings of Children's Fund Dental Committee); Ann Arbor (two meetings of Joint Committee on Health Education); Ionia (twice); Dearborn; Washington, D. C. (National Dental Association); Alanson; Harbor Springs; Pellston; Levering; Petoskey; Haslett; Flint; St. Johns (three times); Williamston; Zeeland; Macomb County (twice, teachers' meetings); Pleasant Grove; Okemos; Webberville; Northport; Traverse City; Charlevoix; Mancelona; Kalkaska; Cheboygan; Onaway; Hillman, Alpena; Grand Rapids; Lake City; Cadillac; Frankfort; Manistee; Ludington.

Activities have consisted of lectures before schools, Parent-Teacher Associations, women's clubs, child study clubs, noon-day clubs, etc., and consultations with school superintendents, teachers, nurses, dentists, and health officers. In almost every place visited, a demonstration examination of elementary grade school children was made before a selected group.

Interest and co-operation have been excellent.—W. R. D.

CHILD HYGIENE NOTES

The field study of the 1620 maternal deaths occurring in Michigan between July 1, 1926, and December 31, 1928, was completed in December.

The board of supervisors of Ottawa County at their October meeting appropriated \$1,500 to defray in part the expenses of the prenatal nurse, Miss Caroline Hollenbeck. This fund became available January 1.

CONDENSED MONTHLY REPORT

December, 1929

Michigan Department of Health Laboratories

	+	—	+—	Total
Lansing Laboratory—				
Throat Swabs for Diphtheria				1045
Diagnosis	24	593		
Release	44	172		
Carrier	7	205		
Virulence Tests	19	5		24
Throat Swabs for Hemolytic Streptococci				472
Diagnosis	129	131		
Carrier	23	189		
Throat Swabs for Vincent's	49	564		613
Syphilis				7097
Kahn	1031	5971	85	
Wassermann	2	7	1	
Examination for Gonococci	157	1619		1776
B. Tuberculosis				440
Sputa	64	376		
Animal Inoculations				
Typhoid				185
Feces	2	83		

Blood Cultures	2	45		
Widals	3	46		
Urine		4		
B. Abortus				49
Dysentery				11
Intestinal Parasites				32
Transudates and Exudates				299
Blood Examinations (not classified)				154
Urine Examinations (not classified)				166
Water and Sewage Examinations				310
Milk Examinations				14
Toxicological Examinations				5
Autogenous Vaccines				4
Supplementary Examinations				220
Miscellaneous Examinations				621
Unsatisfactory Specimens				167
Total for the Month				13704
Cumulative Total (Fiscal year)				99201
Increase over this month last year				296
Houghton Laboratory—				
Examinations made — Total for the Month				1778
Cumulative Total (fiscal year)				11870
Increase over this month last year				392
Grand Rapids Laboratory—				
Examinations made — Total for the Month				7102
Cumulative Total (fiscal year)				38539
Increase over this month last year				829
Typhoid Vaccine Distributed, c. c.				2600
Diphtheria Antitoxin Distributed, units				27509000
Silver Nitrate Ampules Distributed				10220
Scarlet Fever Antitoxin Distributed, Pkg.				176
Scarlet Fever Toxin Dick Test Distributed, c. c.				1960
Scarlet Fever Toxin Immunization, c. c.				2983
Smallpox Vaccine Distributed, points				11595
Bacteriophage Distributed, c.c.				1896

MENTAL TESTS FOUND USEFUL BAROMETER IN MENTAL DISEASE

Intelligence tests given to mentally ill patients from time to time are a useful barometer to measure their progress toward normality, or their sinking back into more serious abnormality, Dr. Emmett L. Schott, of the Henry Ford Hospital at Detroit, told doctors attending the sessions of the American Association for the Advancement of Science at the Des Moines meeting recently.

Normal persons do not vary much in intelligence from year to year. Patients suffering from mental and nervous maladies, however, frequently lose many points in their ability to meet the requirements of intelligence tests, Dr. Schott's records show. Gains in ability to pass the tests are useful indicators of mental improvement in such patients, he has found.

Describing particularly a number of cases of general paresis, Dr. Schott said that one woman had a mental age of almost fifteen years when first tested. After a year during which she had no treatment for her disease she dropped to a mental age of less than thirteen years. Deterioration in such cases is expected, but the tests gave an actual measure of the rapid change. Other cases which went without treatment showed similar rapid mental decline. On the other hand, patients who received the malaria treatment or other special attention for paresis, did not lose ground mentally, and some improved in their mental abilities, the tests showed.—Science Service.

TRUTH ABOUT MEDICINE

TRUTH ABOUT MEDICINE

Dr. J. H. Dempster, Editor,
Journal Michigan State Medical Society,
641 David Whitney Building,
Detroit, Michigan.

Dear Doctor:—

In addition to the articles enumerated in our letter of November 29, the following have been accepted:

E. Bilhuber, Inc.—“Lenigallol-Zinc Ointment.”

Cutter Laboratory—“Scarlet Fever Streptococcus Antitoxin-Cutter.”

Mead Johnson & Co.—“Mead's Viosterol in Oil 100 D.”

H. K. Mulford Co.—“Ampules Sodium Cacodylate-Mulford, $\frac{3}{4}$ grain, 1 c.c.”; “Ampules Sodium Cacodylate-Mulford, 3 grains, 1 c.c.”; “Ampules Sodium Cacodylate-Mulford, 5 grains, 1 c.c.”

Winthrop Chemical Co., Inc.—“Tablets Tutocain No. 6.”

The following article has been exempted and included with the List of Exempted Non-medical Articles (New and Non-Official Remedies, 1929, p. 485):

Child Welfare Guild, Inc.—“Bite-X.”

Yours truly,

W. A. PUCKNER, Secretary,
Council on Pharmacy and Chemistry.

NEW AND NON-OFFICIAL REMEDIES

Gelatin Compound Phenolized-Mulford. — A mixture composed of gelatin, zinc oxide, glycerin, and water, containing 1.5 per cent of phenol. It is used in the preparation of bandages to cover chronic ulcers, unhealed secondary burns and the preparation of pressure bandages for varicose veins when surgical treatment is not necessary. H. K. Mulford Co., Philadelphia.

Diphtheria Toxoid-Mulford, 30 c. c. vial.—Diphtheria Toxoid-Mulford (New and Non-official Remedies, 1929, p. 369) is also marketed in packages of one 30 c. c. vial. H. K. Mulford Co., Philadelphia.

Typhoid-Paratyphoid Prophylactic, Hospital Packages.—Typhoid paratyphoid prophylactic (New and Non-official Remedies, 1929, p. 379) is also marketed in hospital size packages containing ten complete immunizations. The Cutter Laboratory, Berkeley, Calif.

Ampoule Solution Silver Nitrate 1 Per Cent-Cutter.—Solution silver nitrate 1 per cent, approximately 0.2 c. c., contained in ampules composed of beeswax. They are used for the prevention of ophthalmia neonatorum. Cutter Laboratory, Berkeley, Calif.

Polyanaerobic Antitoxin.—An anaerobic antitoxin (New and Non-official Remedies, 1929, p. 346) prepared by immunizing horses with the toxins of *B. tetani*, *B. Welchii*, *Vibrio septique* and *B. oedematiens*. It is marketed in bottles containing 100 c. c., each 100 c. c. containing at least 5,000 units of tetanus antitoxin, 75 units of Welch bacillus antitoxin, and sufficient anti-

toxin to neutralize 50,000 minimum lethal doses of *Vibrio septique* toxin and 100,000 minimum lethal doses of *B. oedematiens* toxin. Cutter Laboratory, Berkeley, Calif.

Normal Horse Serum Without Preservative.—A normal horse serum (New and Non-official Remedies, 1929, p. 344) marketed in packages of one vial containing 100 c. c. H. K. Mulford Co., Philadelphia.

Thompson's Maltose and Dextrin.—A mixture containing maltose, 51 per cent; dextrins, 45 per cent; sodium chloride, 2 per cent; and moisture, 2 per cent. On the claim that maltose is more readily assimilated than other forms of sugar, Thompson's maltose and dextrin is proposed to supplement the carbohydrate of cow's milk or of water modifications of cow's milk. Thompson's Malted Milk Co., Inc., Waukesha, Wis. (Jour. A. M. A., December 21, 1929, p. 1971.)

PROPAGANDA FOR REFORM

Intramuscular Iron Arsenic Comp. (No. 201) and (Intravenous) Iron, Cacod. and Glycerophosphate (No. 202) Not Acceptable for N. N. R.—The Council on Pharmacy and Chemistry reports that a circular with the caption “Formulas of definite therapeutic value” issued by Sci-Medico, Inc., New York, lists an extensive line of preparations marketed in the form of ampules and intended for intramuscular and intravenous administration and includes the following as having “proved useful in the treatment of anemia, nervous debility, neurasthenia, chlorosis and wherever a general tonic is indicated”: (Intramuscular) Iron, Arsenic Comp. (No. 201), each 5 c. c. ampule being stated to contain Iron Cacodylate 1-4 grain, Sodium Cacodylate 3-8 grain, Sodium Hypophosphate 3-16 grain, Manganese Hypophosphate 1-24 grain, Sodium Citrate 5-8 grain, and (Intravenous) Iron, Cacod. and Glycerophosphate (No. 202) each 5 c. c. ampule being stated to contain “Iron Cacod. (Colloidal)” 1 grain, Sod. Cacodylate 4 grains, Sod. Glycerophosphate 1 1-2 grains. The Council declared these preparations unacceptable for New and Non-official Remedies because they are irrational mixtures marketed with unwarranted therapeutic claims. (Jour. A. M. A., December 7, 1929, p. 1809.)

Tucker's Asthma Specific.—The continued exploitation of this cocaine mixture is a standing disgrace to the federal authorities. The nostrum carries a label admitting the presence of 5 grains of cocaine to the fluid ounce. When the Commissioner of Internal Revenue was asked in 1922 how such a product could be sent without violating the Harrison Narcotic Law, his reply was that the cocaine in the remedy became hydrolyzed before it reached the public, and that when used there was either no cocaine or a very small quantity. This commissioner, at the same time, also gave a fulsome puff for the nostrum expressing the opinion that the mail-order distribution of this product served “a great humanitarian cause” and, for that reason, the Treasury Department was taking no action. This in spite of the fact that the product obviously violates the Harrison Narcotic Law, for if it does not actually contain cocaine it admittedly contains a derivative of cocaine, to which the law also applies. Furthermore, if the product does not contain 5 grains of cocaine to the ounce, then it violates the National Food and Drugs Act. (Jour. A. M. A., December 7, 1929, p. 1829.)

Uviol-Jena Ultraviolet Transmitting Glass Ac-

ceptable.—The Council on Physical Therapy reports that the window glass known as Uviol-Jena, manufactured by Schott and Gen., Jena, Germany, and submitted to the Council by the Fish-Schurman Corporation, New York, is stated to be “a glass which transmits the biological ultraviolet rays of the sun” and “in a thickness of 2 millimeters transmits at the same time of installation about 60 per cent of the ultraviolet rays of a wavelength of 302 millimicrons” and “even after ‘solarization’ it still transmits about 48 to 45 per cent of these same rays.” The Council reports that acceptable evidence in favor of these claims was submitted and hence declares it acceptable for inclusion in its list of accepted devices for physical therapy. (Jour. A. M. A., December 14, 1929, p. 1887.)

Medical Treatment of Cataract.—About every five years, the ophthalmic world is thrilled by the announcement of a new medical cure for senile cataract. This has been going on for at least two hundred years. Boric acid and Glycerin, ethylmorphine hydrochloride, subconjunctival injections of mercuric cyanide, radium, antigenic injections of lens proteins, mixed endocrine glands, sodium iodide in all possible combinations, and so on have all had a trial. Not one of them has been scientifically established as of value and more cataracts are being operated on than ever before. (Jour. A. M. A., December 14, 1929, p. 1910.)

Bichloridol.—Bichloridol is a proprietary preparation of corrosive mercuric chloride suspended in a “palmitin” base, intended for intramuscular administration. It is sold in compressible ampules called collapsules. This preparation was formerly marketed by the H. A. Metz Laboratories, Inc., but is now marketed by the Duke Laboratories, Inc. In 1925 the Council on Pharmacy and Chemistry rejected Bichloridol because it was marketed with indefinite statements of composition and under a nondescriptive name. The A. M. A. Chemical Laboratory reports that it analyzed Bichloridol because of inquiries received, one inquirer writing, “One half to one grain a week gives practically no reaction and likewise mighty little therapeutic effect.” The Laboratory found the preparation to contain only from one-fifth to one-tenth of the mercuric chloride claimed. The laboratory points out that a discrepancy of this magnitude is inexcusable and comments on the desirability of physicians confining their use of proprietary preparations to products accepted for New and Non-official Remedies. (Jour. A. M. A., December 21, 1929, p. 1971.)

The Influenza Discover (?).—With little if any apparent warrant, it is again announced, for at least the tenth time in five years, that the causative organism of influenza has been discovered and that it is hoped to prepare a vaccine. There is thus far little or no evidence to indicate that I. S. Falk, Ph. D., and his associates have progressed any further toward the solution of this problem than have workers in other parts of the world, now or in the past. (Jour. A. M. A., December 21, 1929, p. 1975.)

HEART DISEASE IN EARLY LIFE

Heart disease continues to increase in importance as a cause of death. Figures recently compiled by the Public Health Service indicate that last year, in a group of states with approximately 25,000,000 population, the death rate

from heart disease was 228 per hundred thousand. This is compared with rates of 106 from kidney disease, 105 from cancer and 100 from pneumonia. To this high rate various factors contribute, among them the conservation of life in the early age groups and the changing age composition of the population. Yet such explanations do not explain completely, especially when Dr. Clark emphasizes that “heart disease is particularly a disease of early life.” About 75 per cent of all cases of heart disease, he asserts, develop in children under 10 years of age. Rheumatic infections are of the first importance in producing heart lesions in this age group. Unfortunately, a well planned preventive campaign must await more satisfactory knowledge of the etiology of rheumatism. On the basis of available knowledge it can be asserted that “growing pains” should no longer be taken lightly, and that in all children adenoids, tonsils and teeth should be kept under close supervision. Add to these precautions the best of care in convalescence after diseases of childhood, and there is little more that the family physician can do to prevent the onset of heart disease. The school nurse can extend the protecting arm of preventive medicine a further stage by her supervision in the schools and her follow-up work in the homes, both in bringing patients to the physician and in seeing that his instructions are obeyed. —Jour. A.M.A.

X-RAYS AND RADIUM SAVE BABIES' LIVES

X-rays and radium are daily saving the lives of many babies who have enlarged thymus glands, Dr. Howard P. Doub of the Henry Ford Hospital, Detroit, and Dr. H. S. Podlasky of Milwaukee stated at the Toronto meeting of the Radiological Society of North America.

“When a baby strangles or becomes blue or has a hoarseness or a cough, it may have enlarged thymus,” they said. “The thymus gland, located just above the heart, which function as an aid to the growth and development of the child, may become a dangerous organ and cause abnormality or death due to asphyxiation if it develops into an abnormally large thymus. This is especially dangerous to children and frequently causes death. It may also cause a fatality during operative treatment while the child is under anesthesia. The gland, however, may be reduced and made harmless by the use of X-ray and radium treatment.”

Dr. Podlasky, with his colleague, Dr. G. W. Stevens, studied the chests and thymus glands of 750 babies.

“One-third of all new born infants show signs of enlarged thymus,” Dr. Stevens reported. “In this study only about 7.5 per cent of the cases showing enlarged thymus glands showed symptoms sufficient to cause recognition of the enlarged thymus by a physician. This is important as in a symptomless child having enlarged thymus serious results might follow operation under anesthesia. It has been definitely shown that the X-ray produces very beneficial results upon these enlarged thymus cases and there is definite relief to be expected from X-ray treatment.”

“The true man of science worships but one God—truth. He despises the ecclesiastic for teaching half truths for the sake of moral influence; the politicians for dressing up truth in a partisan guise; the business man for subordinating truth to personal gain.”—Fournier.

THE JOURNAL

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"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

THE CRAFT OF SURGERY

Probably college training in the principles of surgery is as thorough as it is possible to give, including all the contributory sciences such as anatomy, physiology, pathology and bacteriology. But all this does not make a surgeon any more than a knowledge of the principles of art makes an artist. The internist is presumed to possess this as a minimum training. There is no other profession, law, theology nor any business that requires the same deftness and skill in the use of the muscles of the hands as medicine and more particularly surgery. Considering this how little attention is paid in medical colleges to the acquiring of technical skill. Probably it is not feasible to permit students the same privilege in the operative treatment of hospital patients as is accorded in practical dentistry. The dental educator has been first to recognize the importance of manual dexterity so that a goodly portion of dental

education is devoted to the peculiar kind of manual training demanded by the profession. The student is instructed in the use of tools; if he possess skill naturally, so much the better. He is taught to carve teeth out of bone and later to perform all the operations of this specialized profession. Instruction in freehand drawing is also part of the course.

The surgeon is the craftsman of the medical profession. That he is much more than a craftsman hardly needs stating. While his work is done on the living body, it is closely allied in other respects to other crafts. His instruments consist of knives, scissors, saws, forceps, chisels, drills, hammers, screw drivers, needles and thread. These are all tools or instruments in special forms of such callings as stone carving, carpentry, leather work and sewing. Skill in the use of these instruments by the various workers requires long and patient training. It cannot be acquired listening to lectures and watching demonstrations. The educational maxim that one learns to do by doing is never truer than in learning to master tools and instruments.

The undergraduate acquires some practise in the anatomical laboratory in his dissections but the time devoted to the attempt at mastering anatomy will not carry him very far towards acquiring an adequate surgical technic. There is a difference between technic and skill. The former has to do with the mode or method of performing a certain act; the latter is "practised ability". Skill can be acquired only by repeated performance with an eye to perfection. If, in "the elder days of art" it required seven years of training under a competent master, how much more training is required to become a master in "the craft of surgery."

GALLBLADDER SURGERY

Surgery of the gallbladder and bile ducts is only about half a century old. Before Lister's day surgery of the gallbladder region was confined largely to the opening of abscesses. Up to 1890, according to Rowlands* massage was advocated as a means of expulsion of gallstones from the bile passages into the duodenum. Gallstones were first observed by Foligno, who died in 1348 a victim of the Black Death. The discovery was recorded in the famous "consilia" or casebooks which were an im-

* The Lancet Nov. 23, 1929, the Bradshaw lecture by R. P. Rowlands.

portant feature of clinical medicine in the fourteenth and fifteenth centuries.

The operation of cholecystotomy was described by Petit in 1733 but was not actually performed until 1867 owing to the fear of general infection of the peritoneum. In 1867 Bobbs opened a distended gallbladder and removed a number of stones. The patient made a good recovery. In August 1879 Lawson Tait removed a large stone from the gallbladder and a small one from the cystic duct. Tait reported in 1889 fifty-five cholecystostomies with three fatalities.

Naunyn made an important clinical study of gallstones in 1892. He introduced the new concept of "cholangitis" as an inflammation of the lining membrane of the smallest bile ducts causing obliteration of their lumina. He regarded biliary calculi as an effect rather than a cause of the disease. (Parenthetically, Naunyn coined the word "acidosis" as the metabolic condition of acid formation in coma.)

Rowlands reports an interesting statistical study by Gross of Leeds based upon a series of autopsies numbering 9,531 of all ages performed at the Leeds Infirmary from 1910 to 1916 inclusive. Eight hundred and two cases of gallstones were found. Gross concluded from this study that gallstones are twice as common in women as in men; that obesity is a greater predisposing factor than pregnancy in their formation. Gallstones were frequently noted in connection with inflammation and cancer of the gallbladder and bile ducts.

Cholecystectomy is said to have been introduced by Carl Laugenbuch, a German surgeon in 1882. His mortality amounted to 50% so that the operation was for a time virtually abandoned, only forty-seven cholecystectomies being recorded up to 1890. For some considerable time gallbladder surgery was confined to the more serious or emergency cases. With more accurate knowledge of the physiology and pathology of the gallbladder and bile ducts, and we might say with more highly developed technical skill, an endeavor is made to forestall the graver conditions that follow in the wake of infection. It is a difficult field in which success comes only to him who prepares himself by a thorough knowledge of the anatomy, physiology and pathology of the structures together by a fine operative technic, or as someone has aptly called it, "skill in the craft of surgery."

OIL AND CIVILIZATION

On the face of it the reader may wonder what such a subject has to do with medicine. However, with the almost all but complete annihilation of time and space which has characterized the world in the last half century, we might safely say that there is scarcely anything that does not concern itself with the medical profession. Just as one man's health is everybody's business, so the matter of plentitude of resources concerns everyone. When one contemplates the amount of gasoline consumed in a single day in this country as well as the quantity of oil that is used up in transatlantic steamship service as well as fuel in various industries and in homes, one wonders how long nature's resource can last. Sir Henri Deterding, managing director of the Royal Dutch Shell Companies, has issued a warning advocating a world wide conservation for the elimination of wasteful methods in the production and marketing of petroleum. Probably no other person is in a better position to make such a warning. There will come a time when the theory that oil supplies are inexhaustible will be proved false. "A great many today think that oil supplies are inexhaustible. We pay too much attention to wasteful exploitations, forgetting that though new fields in the United States may still be discovered, they can never be created. Nature put them in limited number and it is almost childish to state that the more that are discovered the fewer are left to be discovered."

It is possible to use a substitute for oil for fuel but in the machine age in which we are living, the greatest need for oil is that of lubricant. While friction has been to a large extent reduced, there is no possibility of its elimination. What the absence of oil would mean can scarcely be comprehended when it is considered that no small feature of what we call progress is concerned with the abolition of the friction between two surfaces. Probably the only condition in which oil plays no part is that of primitive or savage life where nothing more exciting than the squeaking wheels of an ox car is found necessary for the maintenance of primitive society.

ONE'S OWN BUSINESS

In the Correspondence Department of this number of The Journal, appears a letter from one of the counselors of the Michigan State Medical Society protesting against as well as commenting on the atti-

tude of a physician in the state in his reply to a questionnaire sent out by a clergyman. Accompanying this communication was a clipping from a newspaper of the city in which both physician and clergyman lived. The newspaper took occasion to "play up" the physician's letter which was anonymous but is given as follows:

Dear Sir—May I kindly suggest to you that instead of discussing subjects beyond your scope, you stick to your Bible and preach the unadulterated gospel of Christ?

Sincerely, A Physician.

We quite agree with the attitude Dr. Corbus has taken in regard to the way all too many physicians look upon their professional work. The time has come when no one can properly assume that the business of the physician, or that of the lawyer or clergyman, for that matter, is his own affair which does not concern anyone else. When one writes such a reply to a courteous questionnaire or note he reflects upon the whole profession to which he is "debtor" and tends to bring it into disrepute. Better the attitude of Marley in Dickens' Christmas Carol, when his erstwhile partner Scrooge, was inclined to take a very narrow view of what he considered his personal affair. "Mankind was my business. The common welfare was my business; charity, mercy, forbearance and benevolence, were all my business. The dealings of my profession were but a drop in the comprehensive ocean of my business."

CARBON MONOXIDE POISONING

We are well into the time of the year when cases of carbon monoxide poisoning are reported all too frequently in the daily press. It would seem possible to warn the public against the danger of running automobile engines in closed garages until they warm up to the point of good locomotion. The fatalities, however, that occur year after year indicate otherwise. Of course the automobile is not the only source of danger. The same gas the product of incomplete combustion often issues from furnaces. The enclosed body of a sedan is a source of danger where the exhaust pipe from the motor is defective. There are many other sources of danger from carbon monoxide.

J. A. Campbell of the National Council for Medical Research, Hampstead, England, in a recent study of the subject points out the striking resemblance among the pathological effects of CO poisoning, of exposure to low oxygen pressure in the air,

of hemolysis and of hemorrhage. Campbell agrees with J. S. Haldane, probably the greatest authority on the physiology of respiration, that CO is not in itself a tissue poison, but acts simply by interfering with the oxygen supply to the tissues. The result of breathing air laden with CO is a partial anoxemia. The power to tolerate an atmosphere containing a large quantity of CO depends upon the ability of the heart to function under a low tissue oxygen tension. Haldane has related the symptoms of tissue oxygen starvation to be nausea, vomiting, tachycardia, headache, visual disturbance, irrational states, coma, and finally heart failure. He conducted experiments with the gas with himself as the subject.

Then there is the matter of chronic oxygen starvation, of particular importance in this state with the numerous public garages of industrial cities. Garage workers in confined rooms in which internal combustion engines are running are exposed more or less constantly to great risk. This is a subject for the consideration of our state bureau of industrial hygiene who doubtless has it under investigation.

THE GRENZ RAY

Considerable is known about ultraviolet ray therapy and also superficial X-ray therapy. There is no clear and definite line of demarkation between the ultraviolet rays and the long wave Roentgen rays. From a physical viewpoint the boundary between the two is a relatively broad band in which it is difficult to say whether the rays of this band should be called ultraviolet rays or Roentgen rays. Within recent years or months this portion of the spectrum has been subject to careful investigation with the result that physicists feel that there is a distinct entity and this portion has been designated borderline or Grenz ray. In view of the fact that the Grenz ray will probably play a very important role in the future radiation treatment of superficial conditions, we herewith endeavor to at least define the term. Quoting from Grenz Ray Therapy by Bucky, a review of which will be found elsewhere in this number of The Journal of the Michigan State Medical Society, is a paragraph contributed by Otto Glasser, Ph. D., of Cleveland which describes the physical aspect of the subject.

"It must be understood that there is no sharp boundary between radiations which are called ultra-violet rays and those called Roentgen rays. From a physical point of view this boundary is a relatively broad band. It is difficult to decide

whether the rays of this band should be called ultra-violet rays or Roentgen rays, and usually the name selected depends upon the experimental method by which the rays were produced.

"If we look at this question from the biological and clinical point of view, it assumes a somewhat different aspect. In this field it is of practical importance to obtain rays of a definite quality and sufficient quantity from a radiation generator. It is not yet possible to obtain for practical purposes the whole radiation band between ultra-violet and Roentgen rays. The shortest wave lengths of ultra-violet radiation which are available for practical purposes are in the neighborhood of 1300 Angstrom units, i. e., 0.000013 cm. Until recently the longest waves of Roentgen rays used in biological and clinical work were about 1 Angstrom unit (0.00000001 cm.), although Roentgen rays of 20 Angstrom units have been produced and analyzed by means of difficult experiments carried on in a vacuum. We do not wish to include here those biological and clinical experiments of the early days of the Roentgen rays, which were done with soft rays, because we are uncertain about the exact quality and quantity of the radiations which were used. Only a few years ago Bucky conceived the idea of inserting a transmitting Lindemann window (a glass composed of the low atomic weight elements, lithium and boron) into a constant Coolidge tube with a voltage of only a few kilovolts, and he herewith introduced into radiation therapy soft radiation beams of great constancy. Bucky offers evidence that the radiation beams of from 1 to 3 Angstrom units thus produced have biological effects different from those of the shorter Roentgen rays or of the longer ultra-violet rays. He, therefore, calls these rays 'Grenz rays,' which translated means 'border days.' Since Bucky added these Grenz rays to the armamentarium of therapeutic radiation, radiations of still longer wave lengths have been produced and used for biological and clinical experiments by the French scientists, Dauviller and Saidman."

The production of the Grenz ray requires special apparatus. Neither the X-ray transformer and Coolidge tubes nor the apparatus for the production of ultra-violet rays will answer the purpose.

As the biological effects of the Grenz ray are further studied there will doubtless be found a specific field for this form of radiation therapy.

The matter of investigating and controlling opium, cocaine and their derivatives is a function of the League of Nations. The annual opium production of the entire world is estimated at 8,000 tons, of which quantity not more than twenty tons are required for medical and scientific purposes. There has been a revival of the poppy growing industry in China since 1913 where it has been completely eradicated. A number of states obtain a large portion of their revenue from the sale of cocaine and opium. The smoking of opium is an ancient habit which is as difficult to eradicate as any other national vice. The

drug habit has invaded the west and the trade is said to be in the hands of an international group backed up by tremendous capital.

A PLAGUE OF BOGUS CHECKS

During the past few weeks, three doctors have been victims of the "Bogus Check Racket." In each instance, a guileless appearing stranger with convincing voice, presented pay checks from well known local manufacturing concerns. As might be expected, the checks were quite in excess of the doctor's fee, and the patient walked out of the office with free medical attention and in addition, a substantial roll of bills in his pocket.

In our present period of economic depression, this practice is prevalent not only in Toledo, but has spread like a menacing wave throughout the country. It is regarded as one of the most serious of crime problems and losses are estimated at over \$200,000,000 every year, with an annual increase of 20 per cent. Criminals who formerly toted a gun in relieving their victims of cash, now have turned to this more polite and far less dangerous form of paper fraud.

If anyone should present a check of the United Tourist Association and ask you to cash it, entertain your visitor with politeness, and at the same time get in touch with THE BETTER BUSINESS BUREAU. It may save you money and also may relieve the city of another check fraud nuisance. Be particularly wary of strangers. It pays to investigate and those who mean to transact business in good faith will never take offense at your establishing their integrity.—Bulletin Toledo Academy of Medicine.

STATE MEDICINE

Prof. Schlossmann, of Dusseldorf, lately read a paper before the German Society for Social Hygiene on the crisis in our profession. The liberty of the medical man, he said, is a dream of days gone by and the profession cannot longer resist a progressive nationalization. Apart from some specialists with a large income the majority of doctors earn their livelihood from the fees paid them from institutions under the State Insurance Act. This Act provides them with 250,000,000 marks every year. Moreover, the individual practitioner has to observe so many rules and regulations issued by the government and by insurance authorities that he cannot be described as a free worker. Prof. Schlossmann does not at all agree with the leaders of the profession in their fight against sick clubs and other institutions of state insurance, for he holds that it only embitters their mutual relations. It would be better, he thinks, to co-operate with them so as to get over certain abuses.

According to Prof. Schlossmann, the profession is suffering from an economic crisis, an ethical crisis, and a crisis of confidence. The profession of the younger generation who have to wait several years before admission to club practice is desperate financially, but still worse is the fact that they are obliged to be without work at a time when it is most desirable that they should be gaining experience and consolidating what they have leadned. * * * What is worst of all is the public lack of confidence in doctors. The Insurance Act leads the patient to look upon the practitioner as more of a sick club officer than a medical adviser. Medicine has changed from an em-

pirical to a technical science. The individual practitioner is not in a position to know all the technical methods of treatment and still less to provide for himself all the technical apparatus; this is the reason why patients are often sent to dispensaries, hospitals, and clinics, which have modern equipment. The increasing number of unqualified persons and the afflux of patients to wards them bear further witness to the critical state of the profession.—From Special Correspondence to the London Lancet.

DENTAL DIVERSIONS

The molars of the bourgeoisie
With gold and precious metals glitter,
But Communists, you must agree,
Should find a humbler filling fitter;
The Comrade sins against the light
If he displays a gilt-edged bite.

It lets the new tradition down,
It spoils the Soviet's grand adventure,
If Capital itself should crown
The Comrade's reconstructed denture—
Although perhaps the upper ten
May have gold fillings now and then.

To Kommissars there may be lent
The gold to keep their teeth in fettle;
The baser sort should be content
With any sort of baser metal—
Indeed, for that less favoured crew
A little putty ought to do.
Nor let them, to their deep disgrace,
Attempt to dodge these dental orders,
Lest they should be led forth to face
An armed array of ruthless warders,
Prepared to fill both teeth and head
With free and proletarian lead.

—Manchester Guardian.

(It is reported from Moscow that gold for filling teeth will in future be supplied from the Soviet State monopoly only to patients with a special permit.)

THE COUNTRY DOCTOR

Day in, day out, night out, night in,
Where snow is thick and fees are thin,
He hustles with his cheery grin
To fight with ills.
The drives are long, the nights are cold,
He suffers hardships left untold,
To call upon some mother old
Across the hills.

Little he says about his pay,
Often he gives his skill away,
And though he's getting bent and gray
He has no wealth.
His life has been an endless trial,
His motto has been self-denial;
Freely he gives from every vial
For some one's health.

The gallant soldier goes away
While fife and drum and bugle play,
Bravely to conquer or to slay—
That is his part.
The country doctor rides alone,
Through rugged roads o'er stick and stone
To heal men, not to make them moan;
God bless his heart!

—From The Journal Medical
Society of New Jersey.

THE FACE CURE*

Do you lack determination?
Do you falter in your step?
Are you bad at concentration?
Do you note a lack of pep?
Is your chin a perfect rabbit
That betrays your craven plight?
Has it formed the fatal habit
Of receding from the fight?

Then you waste your time in reading
Works on how to mould the mind,
For the chin that keeps receding
Other treatment you must find;
So betake you to your dentist,
Who will push your face about—
Get your bottom jaw apprenticed
To the man who'll shove it out.

Then you need no other tonic
For the struggle to advance;
With a face Napoleonic
You will conquer at a glance
To the whole surrounding scene is
Your effective challenge hurled—
With a chin like Mussolini's
You can overawe the world.

*("If the upper teeth project and the cause is a receding chin, the lower jaw is brought forward by the sustained but gentle action of plates inside the mouth."—Brief description of newer forms of face-lifting as explained at the annual meeting of the Royal Dental Hospital, London.)

—From the Manchester Guardian.

NEW NAME FOR VITAMIN B

In the old days when vitamins were strange and little known, scientists called them, for convenience, by the letters of the alphabet. But since the vitamins have been split up into twins and triplets, the matter of names has become somewhat involved. Vitamin B, for instance, might mean any of three definite factors, according to what you were talking about. Now an effort is being made to settle the matter, as far as vitamin B is concerned. A committee of the American Society of Biological Chemists considered the matter and after deliberation has recommended three separate names for the three different factors formerly known as vitamin B.

Bios, a term suggested by British workers, is to denote the factor or factors encouraging the rapid growth of yeast cells. The antineuritic factor which is easily changed or destroyed by heat will retain the old family name of B. The more heat-stable, water-soluble, dietary factor which has to do with maintenance and growth, known also as P-P or the pellagra preventive, is to be called G.

The committee also recommended that when more vitamins or other dietary factors are discovered, they should not be given other than descriptive names, such as pellagra-preventive or antirachitic, until their identity is established beyond question. To avoid future complications, the committee recommended that the American Society of Biological Chemists appoint a committee on vitamin nomenclature, to act in co-operation with the British and other European committees as a clearing house for information on vitamin terminology and with power to name new dietary factors when they are discovered.

THE EDITOR'S EASY CHAIR

THE STORY OF MAN

"What a piece of work is man; How noble in reason! How infinite in faculty! In form and moving, how express and admirable! In action how like an angel! In apprehension how like a God! The beauty of the world! The paragon of animals! And yet, to me, what is this quintessence of dust? Man delights me not; nor woman neither."

Thus spake Hamlet, though mankind in its normal moods would hardly subscribe to the concluding sentiment. Man has considered himself the greatest object for his attention ever since he emerged from the pre-savage condition. From the earliest times he has never ceased to try to understand himself. Graham Wallas* the English political philosopher says that man has all but mastered the forces of nature and turned them to his use but he has failed to acquire mastery over himself. He has made discoveries in physics and chemistry that are truly wonderful. This applied knowledge in the way of invention has given him wonderful power over nature so far as making his wars more deadly and destructive but with it all he has failed in the matter of group control. We have not acquired the art of living together as peaceful co-operative groups. The statesmen of two enlightened nations, says Wallas, find it no easier than would the leaders of two Stone Age tribes to form a common purpose and they generally part with nothing better than a vague hope that war may be avoided by accident and inertia. Here's hoping that this day of World Court and League of Nations may at least modify this condition.

MAN AND THE UNIVERSE

Man's outlook has therefore been anthropocentric. A number of very scholarly books which have appeared recently have served to dispel this view, as Copernican astronomy dealt a staggering blow to the geocentric theory of Ptolemy. The *Universe Around Us*,† by Sir James Jeans, a very scholarly professor of Cambridge University, describes the immensities of space as well as the ultra microscopic electron. Jeans shows that the earth is a very minor planet of one of the lesser Solar Systems of which there is a countless number in space. Before he can understand himself, says the author, man must first understand the Universe from which all his sense perceptions are drawn. He wishes to explore the Universe both in space and time, because he himself forms part of it and it forms part of him. The *Universe Around Us* simplifies a difficult subject and renders it of fascinating interest.

In 1754 Rousseau maintained that "The most useful and least advanced of all human knowledge seems to be that of man himself." This opinion would be as applicable today as it was almost two centuries ago.

NEW CONCEPTION OF HUMAN HISTORY

Dr. G. Elliott Smith** says "the farther back we go in time the more definitely and exclusively

anthropocentric all enquiries into natural phenomena become. There is no innate curiosity to study the forces of nature; but such things as seem directly to affect his own welfare have always appealed to man's interest. Man did not at first study physics, astronomy, zoology and botany simply for the intellectual joy of discovery, but so as to benefit himself in some more exact and tangible way than by reputation for wisdom."

Man's early art even consisted of sculptured figures of himself and of the animals which ministered to his wants, or animals which he feared, thus illustrating his egocentric nature. The art of ancient Greek represents the great perfection his art attained. Landscapes were eventually developed as backgrounds to human figures. In a visit to the great art galleries of Europe one is impressed with the very large place the human figure has occupied as subject for the artist. It is interesting also to note the landscape backgrounds that accompany some of the anatomical drawings of the *Fabrica* of Vesalius (Basel, 1543); the same background effects may be seen in the illustrations of the *Human Anatomy* of Godfrey Bidloo (Amsterdam, 1685).

The problems of life and death have engaged the attention of man from the earliest times. His interest in the phases of the moon were due to the fact that he thought that the moon appeared to control the physiological periodicity of women and the life-giving functions. The sky was studied because of the belief that it controlled human destiny. Man's early nature studies were self centered and related to a large extent to the expressions of life in his own body, the heart, liver, kidneys and the blood, according to G. Elliot Smith. All learning was at first focused on the preservation of life. The healer was a naturalist. It is of interest also to note that the words physics and physician both come from a Greek word meaning nature.

TYRANNY OF TRADITION

The author of *Human History* devotes considerable space to a study of what he calls the tyranny of tradition. Most of the things we are doing today, are being done because someone hundreds of years ago in some more or less distant part of the world inaugurated the fashion for vastly different reasons than those which may determine our actions today. Many of our prejudices are the unreasoned heritage of our ancestors sometimes of the very remote past. We can give no plausible explanation of many of the opinions we hold or the things we do on any other grounds. That man is a social being is a truism. We are more or less dominated by the group spirit and it goes without saying that under conditions of civilized life we can display our humanity only insofar as we are social. Man is in fact more dependent upon them for the knowledge of the way to live. He enters life as a helpless being and has to serve a long tutorage before he is able to provide his own necessities.

***Human History* by G. Elliot Smith, M.A., M.D., D.Sc., F.R.S. Dr. Smith has had a distinguished career beginning in 1907 as Professor of Anatomy in the University of London. He has also held the position of Professor of Anatomy in the Egyptian Government School of Medicine at Cairo, Egypt. He has written extensively on anatomical subjects dealing with the comparative anatomy of the brain and the evolution of man. He has also made valuable contributions to the study of anthropology especially with reference to Egypt, *The Art of Mummification* and *The Early History of Civilization*. W. W. Norton & Company, New York.

* *The Art of Thought* by Graham Wallas.

† *The Universe Around Us* by Sir James Jeans.

Therefore the human child is far more dependent upon his fellows than any other living creature, for the knowledge of what to do and how to do it. In the normal child, however, the power of articulate speech enables him to absorb what he needs of the accumulated knowledge of his group. On the other hand this very fact subjects him to the more or less rigid conventions of his society with the result that freedom of thought is more or less hampered. He grows up with stereotyped ideas and manners. In order to understand his actions we must study the history of his social setting thus verifying Comte's expression to the effect that "no conception can be understood through history." Such a training renders us so that we are apt to view the world through the eyes of our particular group rather than to look at it independently. According to Smith the greatest object of man is self-preservation and not necessarily the perpetuation of the species. Goethe once said that the primal human urges were *hunger und leib*. Our author places the first much in advance of the second. He goes on to dilate upon the work of the vital organs of the human body making special reference to the nervous system which is the most marvelous ever devised. Not only does it safeguard the body from dangers that would imperil life itself, but it confers upon the individual the ability to be aware of danger, the emotion of anxiety, to feel pain when injured, and to learn from experience how consciously to avert risks to life.

THE HUMAN BRAIN

The human brain by making provision for learning imposes upon its possessor the vital necessity of cultivating a knowledge of the world as well as of his fellowmen. In this respect it differs from the brain of any other animal. Experience stored up as memory impressions is everything to man. "The distinctive powers of the human brain confer upon him the ability to see the world and what is happening in it with an appreciation of the meaning of visual experience denied to all other living creatures. . . . Apes are probably just as well equipped to see as we are, but they lack the fuller cerebral equipment to interpret the meaning of what they see." The author discusses the function of a portion of the cerebral cortex—the neopallium which he says is the instrument that confers upon man his intellectual supremacy. "The enormous size of the parietal area in the human brain demonstrates the dependence of man upon memories of past experience and the part such memories play in the judgment of the present."

ORIGIN OF ARTS AND CRAFTS

The advance to civilization together with most of the arts and crafts of civilization grew out of the efforts on the part of our remote ancestors to aid in securing immortality. Architecture for instance had its beginning not so much from the effort to provide human shelter, but from the invention of tombs and temples for the extension of the existence of the dead for the attainment of immortality. The provision of these sepulchral structures involved the crafts of the carpenter, stone mason and artist. The ceremonies of incense burning and the pouring out of libations, the arts of dancing and drama were all intended to help the dead regain life and all the vital activities of living people. This statement

is all the more worthy of our attention, considering that the author is one of the few great students of Egyptology who has had rare opportunities to study Egyptian burial customs.

BLOOD OFFERINGS

It is interesting to note also the importance which the blood assumed in the early notions of the race. This of course grew out of the slaughtering of animals for self-protection or for food. The importance of blood is seen in the survival of color symbolism in which we have the use of red ochre in the graves of the earliest representatives of the human species. Many will recall the crude pictures of Stone Age artists showing the heart of an animal with arrows pointing to it, indicating the early age at which the heart was recognized as a vital center. Related we have the various forms of blood offering. It was soon learned that the loss of blood was accompanied by a state of unconsciousness which led to the identification of blood with mind. Hence primitive man argued that blood is *mind-stuff* and as loss of blood produced a sleep-like state and eventually death, early man reasoned that blood was also the *life-stuff*; thus substantiating the theory of the origin of the religious rite mentioned.

THE SCIENTIFIC STUDY OF MAN

For four centuries attempts have been made to make the study of mankind more scientific. The factor that was most influential in giving knowledge a new orientation was the discovery of the New World, bringing to Europeans as it did knowledge of peoples and territories up to the time unknown. Peoples who had not shared the benefits of civilization were found to be truthful, honest and peaceful—a fact that aroused curiosity and interest. A Frenchman, Jean Bodin (1566) introduced a new theory of history which took into consideration the influence of climate and geography and also the fact that history depends largely upon the will of men. His, however, was a voice crying in the wilderness, so powerful at the time was the authority of the Greek philosophers. It is well known to students of medical history that the development of medicine suffered through the slavish allegiance to the authority, particularly of Galen, illustrating the famous saying of Huxley, "that it is the customary fate of new truths to begin as heresies and to end as superstitions."

The viewpoint of Human History, from which this excellent book is written, is a combination of that of Bodin and that of Turgot (1750) which may be summarized as follows: All epics of human history are fastened together by a sequence of causes and effects thereby connecting the condition of the world to all conditions that have gone before. The gradually multiplied signs of speech and writing have made the knowledge of each individual common to all human beings capable of understanding; thus each generation transmits to the next an inheritance which is increased by the discoveries of such age. And again, the author concludes, "The career of mankind has not been the inevitable result of the action of natural causes, but has in large measure been shaped by accidents and catastrophes, by the actions of dominating personalities who have deliberately provoked great movements, peaceful and warlike, which have shaped the destiny of the world."

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. William Hackett of Detroit left for Florida where he will be absent until March.

The A. M. A. Bulletin for January contains two articles meriting thoughtful consideration by every doctor.

Dr. Wilfrid T. Grenfell, the noted surgeon and physician, who has spent his professional life in Labrador, delivered an address in Detroit January 10th on the subject, "The Challenge of Labrador."

Dr. Emil Amberg has returned home and is markedly improved in health after an operation for gallstones at the Mayo Clinic.

At a special meeting of the Board of Registration held in Detroit on January 6th, Dr. Nelson McLaughlin was elected president and Dr. W. H. Marshall of Flint, vice president.

Dr. Arthur J. Cramp, Director of Research of the American Medical Association, addressed the Calhoun Medical Society at Battle Creek on January 7th on the subject, "Patent Medicines and the Public Health."

Dr. Walter J. Cree of Detroit has been appointed an honorary attache of the Consulate of the Republic of Cuba in Detroit. Dr. Cree has spent a major portion of the winters in Cuba for a number of years.

Dr. and Mrs. N. A. Herring of Niles, Michigan, leave for California the latter part of January to be away until the 10th of March. Dr. Herring was at one time President of the Berrien County Medical Society.

Our Society history is going to press. See special announcement this issue and send in your order. We proffer the opinion that it will be the most interesting book in your library. Order now so we may know how many volumes to print.

Dr. Arthur Evan Wood, Professor of Sociology of the University of Michigan, was the speaker at the annual meeting of the Washtenau Medical Society held at the Michigan Union on Jan. 10. Dr. Wood's subject was, Diagnosing the Delinquent.

Dr. E. S. Gurdjian has located at 840 David Whitney Building, Detroit, Mich., where he will confine his work to Neuro-Surgery. Dr. Gurdjian has been instructor in anatomy for four years at the University of Michigan Medical School.

Governor Green made the following appointments for membership on the Michigan State Board of Registration in Michigan on December 30, 1929: Doctors Charles A. Teifer, Muskegon; Wm. Franklin English, Saginaw; T. G. Yeomans, St. Joe. Doctors Nelson McLaughlin of Detroit,

and W. A. Lemire of Escanaba were re-appointed.

Dr. James Christopolous, a graduate of the Detroit College of Medicine, class 1928, sailed Jan. 2 for Vienna, Austria, where he enters the University of Vienna for studies leading to his Ph.D. degree. He will spend a year with Prof. Fenkel for work in gynecological and obstetric pathology as well as general work in the Pathological Institute.

A series of lectures and demonstration clinics was held on January 14th, 16th, 21st, 23rd, 28th and 30th at 11 a. m. each day in the amphitheatre of the Receiving Hospital, Detroit, by Dr. Alfred Adler, the noted Viennese psychologist. Dr. Adler was brought to Detroit under the auspices of the Children's Fund of Michigan, made possible by the munificence of Senator James Couzens. The sessions were restricted to members of the medical profession.

Rheumatic Fever a Heart Disease, is the title of a very attractive little monograph of 120 pages by Dr. John L. Chester of Detroit. This little work goes extensively into the following phases of the subject: 1. Conception, History, Importance. 2. Etiology. 3. Prodromal Systematology. 4. Heart Effects. 5. Diagnosis. 6. Prognosis. 7. Treatment. 8. Heart Failure and Its Treatment. The work is clearly written and the typographical arrangement and format of the work are very attractive. The book retails at \$2.00.

The American Journal of Surgery has practically doubled its size. The publisher, Paul B. Hoeber of New York, has discontinued the publication of the Journal of Roentgenology and has added a section of fifty pages on X-ray and Radium which will be under the editorship of Dr. James Case formerly of the Battle Creek Sanitarium now of the Northwestern University Chicago, Ill. There will also be a short section each month entitled "A Clinical Survey of the Abdomen," by Dr. E. M. Livingstone.

A resolution was passed at the regular meeting of the Wayne County Medical Society on January 7th expressing confidence in Dr. Henry F. Vaughan, Commissioner of Health of the city of Detroit, stressing particularly the Society's apprehension of his co-operation with the medical profession. The resolution read: "We, the members of the Wayne County Medical Society, express our confidence in Dr. Henry F. Vaughan as health commissioner and our appreciation of the co-operation which he has given the medical profession, and express the hope that his excellent co-operation will be continued."

THE COUNTY HEALTH UNIT

The County Health Unit is a workable plan by which the small towns and villages as well as the rural districts of the county may enjoy the same health supervision as the larger cities.

The advantages of a County Health Unit in

Calhoun County are too numerous to be enumerated here, and everyone should be enlisted to help create public sentiment that will bring this about within the shortest possible time. Will you help? Let's go!—Bulletin Calhoun County Medical Society.

OAKLAND COUNTY MEDICAL SOCIETY

The Annual Meeting of the Oakland County Medical Society was held in Pontiac December 19th. An address was made by Dr. Willis S. Peck of Ann Arbor on "The Physiological Action of Physical Therapy Agents." A general discussion followed. The election of officers for 1930 took place at this meeting resulting as follows: President, Dr. B. M. Mitchell; Vice President, Dr. J. S. Lambie; Secretary, Dr. C. A. Neafie; Treasurer, Dr. I. C. Prevette; Delegates to State Society, Doctors F. A. Mercer and C. T. Ekelund; Alternate Delegates, Doctors F. A. Baker and N. B. Colvin; Board of Directors, Doctors R. Y. Ferguson, R. H. Baker, and F. A. Baker.

A BIGGER DETROIT MEDICAL COLLEGE

The Detroit Board of Education met on December 27th and in its appropriation for 1930 the sum of \$508,000 was voted for the Detroit College of Medicine and Surgery. It is proposed to alter the present quarters of the college, St. Antoine and Mullett street, and to construct a twelve story building. This will of course require an additional sum. It is also proposed to house the new dental school with the medical school. Dean McCracken, who was present and addressed the Board of Education, said that members of the staff of the medical school had administered seventy-five thousand treatments to patients during the past year, ten thousand of these in the Receiving Hospital. It was explained that the school was not only helping out in the treatment of indigent patients of the city but it was devoting itself to extension research in the study of iodine treatment of goiter, vitamins and the treatment of sinus trouble.

CHILD HEALTH AND PROTECTION

At a meeting held in Washington on November 7th President Hoover declared his purpose in organizing the conference and gave his conception of the nature of a permanent health program. In brief the program contemplates an extensive study of public health problems with particular emphasis on child health for the purpose of evolving a more extensive program and of determining how the Federal Government may co-ordinate its resources with local agencies. For this purpose a number of study groups have been organized, nine in all. Among these groups is one on Federal Health Organization of which Dr. Haven Emerson is Chairman. Among the eight members are two from Michigan, namely, Senator James Couzens and Dr. F. C. Warnshuis, Secretary of the Michigan State Medical Society. On a committee on Relation of Official and Non-Official Agencies of Public Health Organization, Dr. Henry F. Vaughan, Commissioner of Health for Detroit, is a member along with four others.

GENESEE COUNTY DEPARTMENT OF HEALTH

According to the Bulletin of the Genesee County Medical Society, the Genesee County Health Department will function under new management this year. About a year ago, at the solicitation

of the State Board of Health, supported by a resolution of the Genesee County Medical Society, the Board of Supervisors voted to establish a County Health Department. The need for such an organization is obvious. While the doctors acting as local health officers in the villages function satisfactorily, there were wide gaps of thickly populated territory in which no doctor resided and in which it was necessary for laymen to act as health officers. Further, there was no co-ordination between the work of the various local health officers. To meet this need, to co-ordinate the health work in the county and to carry out health work in the rural schools the new department was established. Dr. W. H. Winchester has been appointed consultant and director of the Board of Health and Dr. Leslie Lambert has been appointed assistant with the title of Commissioner.

PUBLIC HEALTH CONFERENCE

The dinner of the ninth annual Public Health Conference was held in the large ballroom of the Olds Hotel, Lansing, January 8, 1930. Dr. Louis J. Hirschman, Member State Advisory Council of Health, acted as toastmaster. Following a short address, he introduced Lilliam R. Smith, M. D., Director, Bureau of Child Welfare, Chalmers J. Lyons, D. D. Sc., Professor of Oral Surgery, University of Michigan, Member State Advisory Council of Health; Dr. C. C. Slemmons, Health Officer, Grand Rapids; Dr. Don Griswold, Department of Health; Dr. John Sundwald, University of Michigan. He then introduced the speaker of the evening, Charles Milton Newcomb, Delaware, Ohio, who delivered an exceedingly humorous talk on "Emotion-Fear." He concluded in a somewhat serious vein, however, pointing out the importance of fear reaction and the address was closed with a tribute to several American heroes, who had shown marked bravery because they appreciated the danger to which their heroism subjected them and experienced fear, nevertheless. The program closed with a short talk by Dr. Hirschman. The banquet was well attended, the large dining room being filled.

WAYNE COUNTY'S DELEGATES

The balloting for delegates from the Wayne County Medical Society to the next annual meeting of the Michigan State Medical Society which took place January 7th, resulted as follows:

Delegates—Charles J. Barone, E. C. Baumgarten, A. P. Biddle, A. S. Brunk, Wm. J. Cassidy, L. J. Chester, Norman E. Clark, Basil L. Connelly, J. D. Curtis, J. H. Dempster, Chas. E. Dutchess, B. U. Estabrook, L. O. Geib, C. K. Hasley, L. T. Henderson, A. Jos. Himmelhoch, L. J. Hirschman, Stanley W. Insley, Frank A. Kelly, Chas. B. Lakoff, D. J. Leithauser, H. A. Luce, Richard E. McKean, R. L. Novy, Clarence I. Owen, G. C. Penberthy, Wm. S. Reveno, J. R. Rupp, Wm. J. Stapleton, Jr., A. H. Whittaker.

Alternates—L. Byron Ashley, A. U. Axelson, D. S. Brachman, W. N. Braley, C. L. Candler, H. R. Carstens, J. H. Chance, C. R. Davis, E. C. Davidson, D. P. Foster, L. J. Garipey, H. B. Garner, M. H. Hoffman, Wm. H. Honor, Wm. E. Johnston, H. I. Kallet, Chas. S. Kennedy, M. O. Kernick, J. Frank Kilroy, Joseph Liburt, J. J. McClintock, J. B. Morin, H. E. Northrup, Harry A. Pearse, Frank S. Perkin, F. D. Royce, R. L. Schaefer, C. R. Van Gundy, C. C. Vardun, F. C. Witter.

HIGHLAND PARK PHYSICIANS' CLUB

The Highland Park Physicians' Club held its Fourth Annual Clinic at the Highland Park General Hospital on December 5th and it was the most successful one-day clinic yet held. The first number on the program was the weekly clinical conference of the hospital staff, which was well conducted. It showed the great value of autopsies. Dr. J. G. R. Manwaring of Flint gave an instructive address on "Focal Infections." Addresses and clinics followed, being given by nine medical professors from other states and two from London, Ontario. The banquet in the evening was at the Masonic Temple, where Mayor Shields gave the physicians a hearty welcome. Dr. J. D. Brook, President of the Michigan State Medical Society spoke about a number of legal aspects relative to the profession and promised to do what he could for the Wayne County Medical Society. Mr. Gus W. Dyer, the outstanding orator of the middle west, from Vanderbilt University, Nashville, Tenn., gave a witty address on "Fundamental Americanism." His humorous stories were much to the point. The greatest danger to Americanism, he claimed, was "Socialism" which received many hard knocks. Organized charity also came in for much criticism.

STATE HOSPITAL PROGRAM

Dr. George F. Inch of Traverse City, as announced, has been appointed Medical Superintendent of the new state hospital to be built near Ypsilanti this year. This hospital will be one of the state hospitals to be erected out of the \$27,000,000 building program. Mr. Albert Kahn of Detroit is the architect. It is estimated that the cost when completed will be about seven and a half million dollars. The capacity will be 5,000 patients. Dr. Inch will work with Mr. Kahn in completing the plans for the hospital and in supervising the construction. He will be succeeded at Traverse City by the present Assistant Superintendent Dr. Phillip Sheets. Dr. Inch has been executive for the Michigan hospital system for the past twenty-four years, and was at one time assistant superintendent at Kalamazoo and later was in charge at Traverse City. His familiarity with Michigan institutions as well as his ability as psychiatrist amply justifies the choice of Governor Green in his appointment.

It is said that plans for increasing the capacity of Michigan state hospitals are in process of being carried out for which appropriation of approximately \$27,000,000 has been voted. The hospital at Kalamazoo will have 3,000 additional beds, at Traverse City 3,000, the capacity of the Michigan Home Training Farm at Lapeer will be increased to 4,000. The Newberry and Ionia hospitals will be able to house between 1,200 and 1,500 additional patients. The Epileptic Farm Colony at Wahjamego, Mich., will likewise have its capacity increased.

Church instead of filling out the questionnaire as requested. But many other physicians filled out and sent in the questionnaire with great care. The secretary of the State Board of Registration in Medicine, in addition to carefully filling out the questionnaire, sent us various documents bearing on the work of the profession.

"In the sermon next Sunday morning, Dr. Cook will make use of the answers to these questionnaires in his sermon on 'The Body and the Soul',—the work of the physician.

"The questions sent to the physicians are concerned with the ethics of the profession,—retention of cases which they cannot successfully handle, obligation to the patient when that seems to conflict with courtesy to a fellow doctor, the relations of bodily conditions to emotional and mental states, attitude toward patent medicines, toward healers who are not fully prepared 'legitimate practitioners', etc."

(From Wallin Church Paper).

The above article, caption and all, I found in a recent issue of a Grand Rapids church paper. It is so significant that I desire to make some comments upon it.

As a profession we have been deploring the fact that the attitude of the public toward the medical profession has, in late years, materially changed. There has been expressed a lessened respect for the doctor. With the passing of the general practitioner that close personal relationship, closer even than that of the minister or priest to the family, has to a considerable extent, disappeared. We have, as a profession, looked upon this with regret and concern, yet the public is, in a greater degree than ever before, interested in the progress of medicine and interested in the attitude of the profession. Although within the covers of the lay magazines you will find many articles in which the profession is criticised, yet that these articles are there at all is indicative of the fact that the public is interested.

Now these questions that this minister has in his questionnaire are perfectly sane questions, questions which answered carefully by the doctor, offer an opportunity for a sermon which might well be of advantage to both the laity and the profession. Evidently most of the doctors appreciated the spirit of this questionnaire and the importance of its being treated earnestly, but here is a doctor who is so unappreciative of the purpose of such a questionnaire and its importance to the profession as a whole that he writes a most discourteous letter. It is just such an attitude taken by the individual doctor that is responsible very largely, for the critical attitude of the laity toward the profession. Fortunately it is only the occasional doctor who overcharges. It is only the occasional doctor who resents his obligations to do charity work. It is only the occasional doctor who fails to carry the medical ideals so generally held by our forefathers,—but these occasional incidents serve well those who would criticize the profession.

"If you are to be a real doctor," to quote Oliver Wendell Holmes, "You must have all those traits of character which fit you to enter into the most intimate and confidential relations with the families of which you are the privileged friend and councilor." If all doctors had these traits there would be little room for criticisms. Too often in the past has the profession taken something of the attitude that this physician took, not neces-

COMMUNICATIONS

"MIND YOUR OWN BUSINESS"

"That is, in effect, what one of the one hundred doctors wrote to the pastor of Wallin

sarily a discourtesy, but a desire to keep aloof from other professions and other activities. This tendency is largely responsible for the various abuses which have crept into the activities of lay groups who have concerned themselves with social betterment. Had we interested ourselves more in such activities there would not now exist these abuses of which we frequently complain. There is no group who by education and training, by experience and by contacts, has so full a knowledge of the needs of a community from a charitable and health standpoint, as the medical profession. There is no unit of organized medicine which is in such a favorable position to co-operate with the various civic groups as the county Medical society. I feel confident that this co-operation will be appreciated and that with better acquaintance there will come a better appreciation of what organized medicine stands for and is trying to do. If the recent legislative fracas taught us anything it is that a deal of education of the public is necessary to convince them that doctors still have ideals and still believe that the interest of the patient is paramount.

BURTON R. CORBUS,
 Councilor and Vice Chairman of
 the Council M. S. M. S.

To the Editor:

I was particularly interested in the statistics furnished by the Wayne County Society in discussing Public Welfare and its relation to the practicing physician, his services and fees, in the December Journal M. S. M. S.

The subject is not new as the annals of history contain graphic records of the struggles of the physician down through the centuries. Akin to other pursuits in life, the medical profession has its diversified classes of physicians as regards wealth and poverty, success, partial failure, and failures. Taken as a whole the medical profession has been markedly successful in study and research, and has brought comfort and relief to suffering millions of the human race.

To rightly understand the plight the medical profession finds itself at the present day, one must acquaint himself of the underlying social principles which are responsible for conditions as they exist today, and are expressing themselves in different forms in every walk of life. Our social conditions involve economic problems of stupendous proportions, ramifying, as they do everywhere, and bring into consideration the rich, poor, as well as the well-to-do class, or what is termed the middle class. All humanity is involved in this great human struggle as outlined in that wonderful book written by Henry George a half century ago "Progress and Poverty."

The causes of human poverty are graphically stated, as well as advancing proven policies, which, if incorporated into our civil laws, would abolish human suffering. If the average physician would acquaint himself with this philosophy he would thoroughly understand the reason for existing clinics and social welfare organizations, and would better appreciate the end results of his efforts. I know I will be severely criticized if I venture the statement that the great white plague is largely an economic disease, brought about by the greed of man, and under the broad subject of dissipation we may catalogue the major causes of human suffering. Centralization of power as vested in money and credits is slowly, but surely, usurping the right of the average citizen, and he

passively submits to the yoke by the practice of economy for obvious reasons, and probably through lack of understanding. The first place the average humble citizen starts to practice economy is at his table, then in fuel for warmth, they being the place least observed by his fellow citizen. I have often observed and been told of these economic struggles by honest patients. The story is too long to be told in a brief article.

Aside from the struggle of the lowly we have the record of the newly made rich and the affluent. Very often the first thought of many so classed is to rush into the church, and to become interested in social welfare work that they may do something for struggling humanity. If the principles as set forth in the George philosophy were thoroughly understood and made workable, we would have no need for the generosity of those who garner their riches at the expense and extortion of the masses. The average physician who renders service in the relief of the poor and unfortunate, while laudable in its scope, is only aiding to perpetuate human misery.

It is not a far venture in the future when we will see the profession existing as two distinct classes, the Specialist and the general practitioner with the latter quite outclassed socially with his fellow colleague. In England this has been so for many years. While living in London in the year 1912 I studied under a very able and good man, Mr. McNab, poor fellow lost his life in the first year of the World War. In conversation with him in his study he told me that all specialists in London were addressed as "Mister" in preference to the title "doctor"; and his patients always came prepared to pay his usual consultation fee of two pounds, (about ten dollars), no questions asked, simply left the amount in an envelope or tendered at the close of consultation. A day or so later a physician was called to treat a servant at the place where I had living quarters in Oakleigh Square and I engaged him in conversation as to his duties in the practice of medicine. He told me his usual fee for house visits was seventy five cents, and that the average doctor had mighty hard going to make both ends meet, and that the general man was practically a "Bird dog" (using his own words) to round up patients for the fellows "our Mister" who gets the better fees, and not only that, but gets the money in hand.

Can it be true these conditions are knocking at our door for admission? The clouds are appearing on the horizon as is evidenced by the spirit of unrest amongst the profession.

The advent of the present century has gradually been closing the door of opportunity. We are no longer living in a pioneer age. If you doubt this compare statistics as regards entrance requirements, etc., to medical colleges twenty-five to thirty years ago and today. A quarter century ago the ambitious poor farmer boy was able to enter college from his high school. What are the requirements today? How far into the future are the years before he can really earn a livelihood as compared to former years? The future physician will be a man of fine training and comfortably able to start out in life without the fear of poverty, but will he possess all those finer qualities that made the family physician of former years, sympathetic, kind, and understood from experience the needs and suffering of mankind? A real surgeon today is he who possesses the combination of those rare traits, skill and judgment. The dispensation and administration of

drugs is a minor part in the relief and suffering of man. Man craves more than any other thing first, a sympathetic understanding of his suffering.

As Henry George says, the human race is primarily social, and linked with man's relation is individual pride and resentment. The normal man does not seek or ask the giving of alms; this he resents, but he does seek opportunity for expression of the higher and better forms of life.

The dispensation of charity is an Art. Are we equal to the task?

Jno. F. Cardwell,
2059 Jefferson Dr., S. E.,
Grand Rapids, Mich.

YE TONSIL OPERATORS BEWARE!*

To the Nurse or Doctor: If Alfreda's blood is in the wrong part of her body, do you think it wise to take her tonsils out today? I know you know better than I do, but I think today her blood is in her head.

Respectfully,
Mrs. Johnson.

* A letter received by one of them.

DEATHS

Dr. John A. Lenfesty died at his home in Mt. Clemens on December 17th, 1929, at the age of 60 years. He had practised medicine for nearly forty years at Mt. Clemens. Dr. Lanfesty was born at Strathroy, Ont. He attended the University of Michigan, where he graduated in 1893, beginning practice in Mt. Clemens in 1894. He is survived by his widow, two daughters, Miss Florence at home and Mrs. Gladys Latimer of California, as well as two brothers, Dr. Fred K. Lenfesty of Mt. Clemens and Dr. J. P. Lenfesty of DePere, Wisconsin, and one sister, Mrs. C. A. Thompson of Penetanguishene, Ont.

HEART BEAT STARTED BY RADIOACTIVE POTASSIUM

The potassium in the diet is the radioactive element which normally performs the vital function of starting the heart beat, it appears from experiments conducted in the laboratory of Dr. H. B. Zwaardemaker, professor emeritus of physiology at the University of Utrecht. These experiments have just been reported by Dr. Charles C. Lieb, professor of pharmacology at the College of Physicians and Surgeons, Columbia University, who has himself spent some time on research in Dr. Zwaardemaker's laboratory. Earlier experiments of Dr. Zwaardemaker seem to have definitely established the fact that potassium is a radioactive element. The recent experiments have indicated that a radioactive element is essential in the initiation of the heart beat, and therefore an indispensable element of diet. Pursuing these studies further Dr. Lieb will investigate the pharmaceutical value of radioactive spring waters, such as those found at Saratoga Springs, Arkansas Hot Springs, the Georgia springs owned by Governor Roosevelt of New York, where in-

fantile paralysis cases are treated, and many other famous spas throughout the country. For years it has been known that the waters of these springs were radioactive, but the active charges have been so small that leading radium authorities have considered their radioactivity a negligible quantity therapeutically.

Dr. Zwaardemaker's work, Dr. Lieb pointed out, not only indicates that the radioactivity of potassium is one-millionth to one-hundred-millionth that of radium, but that even this minute charge is essential to the maintenance of the heart beat.

"This may mean," said Dr. Lieb, "that even the very slight degree of radioactivity in the waters of famous spas is of distinct therapeutic value, although it is impossible for me to make any statement on the subject before extensive experimentation. Dr. Zwaardemaker discovered, however, that the radioactive elements uranium, polonium, thorium and radium may replace potassium in some of the simpler processes of cell activity.

"In just what radioactive group potassium must be placed we have not determined. Probably that is the work of a physicist. But it does seem to be established that potassium gives off beta radiation. This is distinguished from alpha and gamma radiation as being in the order of the electron. Alpha radiation consists of helium atom nuclei, while gamma radiation is hard like X-rays.

"It is apparently the electrons from potassium atoms and their ionizing power that furnish the energy necessary in initiating the heart beat, but we are not yet prepared to discuss the mechanics of the process."

Dr. Lieb explained that the experiments consisted of the perfusion of the hearts of eels and frogs. When the hearts of these animals are taken out canulae, or small glass tubes, are attached to the blood vessels and fluid is passed through the hearts. The fluid does not contain potassium or other radioactive elements at first, and the heart ceases to beat in half an hour to an hour.

Potassium is then introduced into the liquid and the heart resumes its beat and continues to beat for about twenty-four hours. Similar results are obtained when, instead of potassium, another radioactive element is used. Not only did this physiological action lead to the conclusion that potassium was radioactive, but measurements on specially constructed electrometers indicated that it gave off beta radiation.—Science Service.

EXERCISE KEEPS MIND AGILE

If one would keep his mind in its youthful, agile state when it would tackle new problems, new languages, new theories of science, don't ever stop learning. This practical advice is deduced from an experiment on the learning powers of adults which were described before the American Association for the Advancement of Science by Herbert Sorenson of the University of Minnesota, at the annual meeting, Des Moines, Iowa. Mr. Sorenson compared the learning abilities of various school teachers, twenty to fifty-six years old, who were taking courses in education at the university. Adult students who were resuming study after a long "lay-off" from taking courses showed a decreased learning ability with increasing age. But those who had been recently doing university work were not handicapped by increasing age, he found.—Science Service.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

Frederick C. Warnshuis, M. D.

Secretary Michigan State Medical Society

Our Medical History

Following three years of diligent editorial research and writing by our Committee on Medical History, headed by Dr. C. B. Burr of Flint, our History is ready for the press. It is expected that the first volume will be ready for distribution in April. Dr. Burr has in his own inimitable language and way compiled a most intensely interesting history of our Society and the profession in Michigan. It is written in very fascinating style. It includes the earliest days and records and in our opinion excels any published history of any state. It is not a dry biography of men and events. It is a scholarly, literary composition.

Every member will want a copy for his library. Your order is solicited now in order that we may determine how many copies to print.

The second volume will appear during the early summer. Each volume will contain about 800 pages well illustrated. The price is \$10.00 for the two volumes. Five dollars to be sent with the order and the balance when notified that the second volume is ready for delivery.

Please send in your order today.

ORDER BLANK

F. C. WARNSHUIS, *Secretary*,
1508 Grand Rapids National Bank Bldg.,
Grand Rapids, Michigan.

I hereby subscribe for the two volumes on *The Medical History of Michigan* and agree to pay the price of \$10.00 for the two volumes. I enclose \$5.00 and agree to remit the balance when advised that the second volume is ready for delivery.

Signed

Street

City

NOTE: FIVE DOLLARS MUST ACCOMPANY THIS ORDER

MONTHLY COMMENT

Oakland County Society commences the new year with the issuance of an attractive, interesting eight-page bulletin. Previously the secretary issued a very attractive, live letter announcing programs and items of interest. Congratulations are tendered to the members of this county unit who are alert and compose an achieving society that has been in existence since 1831.

Please note the announcement and order blank for our Medical History that is now in process of publication. You will find it in this issue. Send in your order now so that we may determine the number of volumes to be printed.

The mid-winter meeting of the Council and the Annual Conference of County Secretaries was held in Chicago January 22 and 23. The minutes and reports will appear in the March issue.

The State Board of Registration minutes appear in this issue. They are published for your information as well as for record.

You are reminded to observe the recommendations of the Committee on Civic and Industrial Relations. It is quite essential that all members observe the principles adopted.

Business is slowly recovering from the adverses sustained last October. Our advertisers have been loyal and only a few have cancelled or reduced their space. Our advertising income is extremely necessary. We are dependent upon it to defray part of our Journal expense. Our volume of advertising is largely dependent upon the patronage our advertisers receive from our members. The call is therefore issued that you carefully read our advertising section, answer the keyed ads, patronize our advertisers in preference to non-advertising firms. You owe this support to these firms who make your present Journal possible. Will you exhibit this support?

Dr. Burr has performed his editorial duties in a masterly manner in compiling our Medical History of Michigan. He has thoroughly covered the field in a manner that imparts historical events, incidents and anecdotes in a style that is interestingly and fascinatingly narrated. Every member should subscribe for the two vol-

umes. Send in your order now on the blank published in this issue.

After you have paid your current dues to your local secretary and he has remitted them to this office your State Certificate will be mailed to you. Watch your mail. Your Certificate will come to you in a brown envelope that is identified by the name of the State Society and an inscription—"This envelope contains your membership Certificate." Do not confuse it with the advertising matter that comes in your mail.

STATE BOARD OF REGISTRATION IN MEDICINE

Special Board Meeting held at 1010 Maccabee Building, Detroit, Michigan, on January 6, 1930.

PRESENT: Drs. Nelson McLaughlin, Frank A. Kelly, W. H. Marshall, J. D. Brook, J. Earl McIntyre, W. Ellwood Tew, Charles A. Teifer, Wm. F. English, and T. G. Yeomans.

ABSENT: Dr. Wm. A. Lemire.

Dr. Fred C. Warnshuis, Secretary, in the Chair.

The meeting was called to order by the Secretary.

* * * *

By Dr. Kelly, supported by Dr. McLaughlin:

Resolved, That Dr. W. H. Marshall act as temporary chairman of this meeting.

Yeas: 9; Nays: 0.

Motion carried.

Dr. W. H. Marshall in the Chair.

Dr. Charles A. Teifer, of Muskegon, Dr. Wm. F. English, of Saginaw, and Dr. Therod G. Yeomans, of St. Joseph, submitted their commissions from Governor Green, appointing them as members of the Board of Registration in Medicine.

* * * *

By Dr. Brook, seconded by Dr. McIntyre:

Resolved, That we now proceed to cast a ballot for President and Vice President of this Board.

Yeas: 9; Nays: 0.

Motion carried.

* * * *

By Dr. Kelly, seconded by Dr. Brook:

Resolved, That Dr. Nelson McLaughlin be nominated President for the ensuing term of two years.

Yeas: 8; Nays: 0.

Motion carried.

* * * *

By Dr. Tew, seconded by Dr. Yeoman:

Resolved, That the nominations for President be closed, and Dr. McLaughlin be declared President of this Board.

Yeas: 8; Nays: 0.

Motion carried.

Dr. McLaughlin in the Chair.

* * * *

By Dr. Brook, seconded by Dr. Kelly:

Resolved, That Dr. W. H. Marshall be nominated as Vice President of this Board for the ensuing term of two years.

Yeas: 8; Nays: 0.

Motion carried.

* * * *

By Dr. Brook, seconded by Dr. Tew:

Resolved, That the nominations be declared

closed, and Dr. Marshall be named Vice President of this Board.

Yeas: 8; Nays: 0.

Motion carried.

* * * *

Re: The Federation of State Medical Board meeting.

The Annual Congress of State Medical Boards of the United States will be held at Chicago, on February 17th-20th, 1930. An invitation is extended to the Michigan Board members to attend this meeting.

By Dr. Kelly, seconded by Dr. Brook:

Resolved, That Dr. McLaughlin, as President, be designated as a representative of this Board at the annual meeting.

Yeas: 9; Nays: 0.

Motion carried.

By Dr. McIntyre, seconded by Dr. Teifer:

Resolved, That Dr. Marshall, as Vice President, be designated as a representative of the Michigan Board at the Annual Congress of Medical Boards.

Yeas: 9; Nays: 0.

Motion carried.

* * * *

Re: Annual Report to the Governor.

The annual report to the Governor is herewith submitted by the Secretary:

"Governor Fred W. Green,

"Executive Office,

"Lansing, Michigan.

"Honorable Sir:

"In compliance with the provisions of Act 237, I respectfully submit this Annual Report for the year 1929:

"1. The personnel of the Board was as follows:

Dr. Nelson McLaughlin, Detroit, 1929.

Dr. W. A. Lemire, Escanaba, 1929.

Dr. Albertus Nyland, Grand Rapids, 1929.

Dr. George LeFevre, Muskegon, 1929.

Dr. Guy L. Connor, Detroit, 1929.

Dr. Frank A. Kelly, Detroit, 1931.

Dr. W. H. Marshall, Flint, 1931.

Dr. J. D. Brook, Grandville, 1931.

Dr. J. Earl McIntyre, Lansing, 1931.

Dr. W. Ellwood Tew, Bessemer, 1931.

"2. On October 7, 1929, Dr. Guy L. Connor resigned as Secretary. The resignation was accepted and Dr. F. C. Warnshuis, of Grand Rapids, was elected Secretary.

"3. On December 30, 1929, you appointed to membership the following physicians:

Dr. William F. English, Saginaw, 1933.

Dr. T. G. Yeomans, St. Joseph, 1933.

Dr. Charles A. Teifer, Muskegon, 1933.

Dr. Nelson McLaughlin, Detroit, 1933, (reappointment).

Dr. William A. Lemire, Escanaba, 1933, (reappointment).

"4. On December 1, 1929, the offices of the Board were moved from the Stroh Building to 1010 Maccabee Building, Detroit.

"5. During the year the Board held three regular meetings and conducted examinations at Ann Arbor, Detroit and Lansing.

"6. Statistics:

(a) Number of applicants examined for physicians and surgeons license, final examination 269

Number writing primary examinations 308

(b) Number of applicants examined for limited practice license, (drugless practitioners) 10

(c) Applicants failing in physicians and surgeons examinations 1

(d) Applicants failing in limited practice examination 6

(e) Total number of licenses issued to physicians and surgeons, during the year 313

(f) Total number of limited licenses issued 4

(g) Licenses issued through indorsement of credentials 93

(h) Licenses issued through examination 220

(i) Total number of all licenses issued 317

(j) Number of licenses suspended 1

(k) Number of licenses on probation 1

(l) Number of licenses revoked 1

(m) Number of hearings given 15

(n) Number of prosecutions instigated, or assisted in 13

(o) Number of hospitals inspected (for intern training approval) 2

(p) Number of medical schools inspected 1

(q) Total fees collected during the year \$12,656.00

(r) Total expenses during the year 10,456.78

"7. Plans are under way for taking a complete census of all licensed practitioners in the state during 1930.

"8. The assurance is tendered that this Board is functioning in strict compliance with the provisions of Act 237, as amended, and that the Board is fully discharging its responsibilities to our Commonwealth.

"9. The Board desires to record its appreciation for the assistance and advice received from the Attorney General and from the State Constabulary. Our appreciation is also expressed to state officials with whom our work has brought us in contact.

Respectfully submitted,

Michigan State Board of Registration in Medicine,

(Signed) Nelson McLaughlin, Pres.

(Signed) F. C. Warnshuis, Sec'y.

Dated, Jan. 6, 1930."

* * * *

By Dr. Tiefer, seconded by Dr. McIntyre:

Resolved, That the report to the Governor be placed on file and a copy sent to the Governor.

Yeas: 9; Nays: 0.

Motion carried.

* * * *

Re: Intern Curriculum.

By McIntyre, seconded by Brook:

Resolved, That the Secretary be instructed to formulate a Standard Intern Curriculum to be followed by the approved hospitals of the state, the same to be submitted to the Board at the June meeting for approval.

Yeas: 9; Nays: 0.

Re: Osteopathic Practice.

A letter from Emerson R. Boyles, Deputy Attorney General, of Lansing, was read with reference to the scope of practice of registered osteopaths as contrasted with registered physicians and surgeons in the state.

The following reply was submitted:

"Mr. Emerson R. Boyles,

"Assistant Attorney General,

"Lansing, Michigan.

"Dear Mr. Boyles:

"Acknowledging receipt of your letter of December 12, enclosing copy of a letter from Mr. Glenn W. Jackson, prosecuting attorney of Delta County. Please be advised that your communication was presented at a special meeting of the

Board held at Detroit on Jan. 6, 1930, and after a full discussion I was directed to send you the following expression:

1. Webster defines osteopathy as "A system of treatment based on the theory that diseases can be remedied by manipulation of the bones, nerves, blood vessels, etc.", and an osteopath as "A practitioner of osteopathy."

2. It is our experience in passing upon Acts created by the Legislature, that all courts (and especially the Supreme Court) place much credence and weight upon the intent of the Legislature, in the interpretation and application of a legislative measure.

3. At the time of the passage of the Osteopathic Act, the purpose and intent was to enact a law that would delegate the licensing of osteopaths to a board composed of osteopaths and remove this power and duty from the Board of Registration in Medicine. It was clearly represented and it was the understanding of the Legislature at that time that this Act did not and would not confer upon an osteopath the right to practice medicine and surgery as granted to graduates in medicine. Were this the intent, there would have been no need to create a second board, as one already existed under Act 237 of Public Acts of 1899. To license osteopaths, by an osteopathic board composed of osteopaths, was the sole intent of this legislature.

4. It is the opinion of this Board that the osteopath would be violating our Michigan laws if he engages in the practice as outlined in the letter of the county prosecutor.

Yours very truly,

Michigan State Board of Registration
in Medicine,

By: F. C. Warnshuis, Secretary.

By Dr. Brook, seconded by Dr. Tew:

Resolved, That the communication to the Assistant Attorney General be approved.

Yeas: 9; Nays: 0.

Motion carried.

* * * *

Re: New form of Certificates of Registration.

By Dr. Brook, seconded by Dr. Kelly:

Resolved, That the new form of certificates of registration, or licenses, be approved as of January 1, 1930.

Yeas: 9; Nays: 0.

Motion carried.

* * * *

Re: Medical matriculation and Dr. Bonathan, of Hurley Hospital, Flint.

By Dr. Brook, seconded by Dr. McIntyre:

Resolved, That Dr. Bonathan be permitted to write the Board examination in June, and if successful, that a certificate of registration be issued to him upon submission of a hospital certificate covering one year of service.

Yeas: 9; Nays: 0.

Motion carried.

By Dr. McIntyre, seconded by Dr. Marshall:

Resolved, That the Secretary be instructed to invite the Dean of the University of Michigan School to attend the June meeting and report regarding the present method of matriculation in the medical school.

Yeas: 9; Nays: 0.

Motion carried.

Re: Dr. Jos. M. Hanson, Detroit, Michigan.

Mr. A. Klette, of 5893 Hazlett Ave., Detroit, made a personal appearance and entered a complaint regarding the mode of practice of Dr. Jos. H. Hanson.

By Dr. Kelly, seconded by Dr. McLaughlin:

Resolved, That the Secretary be instructed to receive all complaints from laymen, also from the Detroit Department of Health, with a view to instituting legal action against this practitioner and the ultimate revocation of his license.

Yeas: 9; Nays: 0.

Motion carried.

* * * *

Re: Dr. Fred M. Henry, Detroit, Michigan.

By Dr. Kelly, seconded by Dr. McIntyre:

Resolved, that upon proper filing of his credentials, Dr. Henry be admitted to the Board examination on January 6, 1930.

Yeas: 9; Nays: 0.

Motion carried.

* * * *

Re: Dr. George L. LeFevre, Muskegon, Michigan.

By Dr. McIntyre, seconded by Dr. Tew:

Resolved, That the following resolutions be adopted, be spread upon the minutes of this Board, and a copy be sent to Dr. LeFevre.

Yeas: 9; Nays: 0.

Motion carried.

"To Whom It May Concern:

"The Michigan State Board of Registration in Medicine, in special session assembled, learns with sincere regret of the termination of the term of office of Dr. George L. LeFevre.

"Dr. George L. LeFevre served as a member of this Board for a period of sixteen years, the majority of which he served as President.

"During his term of office he faithfully and conscientiously discharged his official duties. Ever did he acquit himself of the trust reposed in him. Of sterling integrity, pleasing personality, holding the highest professional qualifications, keen of judgment and unfailingly fair in his executive duties, he gave of his time and labors to enhance the activities of this Board. The services he rendered materially elevated the standard of medical education and practice in Michigan, thereby safeguarding the health interests of the people of this Commonwealth. His contribution of time and services was a material and valuable factor in maintaining the standing and prestige of this Board. The termination of membership is a distinct loss to the people of this state and to the profession of medicine. Openly and appreciatively acknowledging his labors and his professional and personal qualifications, this Board does hereby record and

"Resolve, That our most sincere thanks be tendered to Dr. George L. LeFevre for the contributions personally made to medical education and to the administrative work of this Board, and further

"Be It Resolved, That we extend to Dr. George L. LeFevre our collective and individual hearty good wishes for his future health and happiness, and

"Be It Further Resolved, That these resolutions be sent to Dr. LeFevre and spread upon the minutes of this Board, in order that a record of his services may be preserved for all time and

so serve as an inspiration to present and future members of this Board.

Michigan State Board of Registration
in Medicine,

By: F. C. Warnshuis, Secretary.

Dated, Jan. 6, 1930."

* * *

Re: Dr. Albertus Nyland, Grand Rapids, Michigan.

By Dr. Brook, seconded by Dr. McIntyre:

Resolved, That the following resolutions be adopted, spread upon our minutes, and a copy sent to Dr. Albertus Nyland.

Yeas: 9; Nays: 0.

Motion carried.

"To Whom It May Concern:

"The Board of Registration in Medicine, in special session assembled on January 6, 1930, learns of the expiration of the term of office of our esteemed fellow member and past president, Dr. Albertus Nyland.

"Dr. Nyland served diligently and faithfully for a period of twenty-five years. During his service he was ever alert to, and faithfully discharged, the responsibilities reposed in him. His official acts ever reflected a high quality of character, unfaltering honesty, tolerant consideration and an ever expressed desire to uphold a high standard of educational and practice qualifications for members of the medical profession.

"Dr. Nyland gave of self, of time, and of his wealth, in order that the prestige of this Board might ever remain upon a high plane and that the welfare of the people of this state might be conserved in the fullest degree. His services will ever be construed as a commendable contribution to mankind. Therefore,

Be It Resolved, That the members of this Board hereby acknowledge the valuable contributions and services rendered by Dr. Albertus Nyland and tender to him our sincere thanks and appreciation, and

Be It Further Resolved, That this expression of our esteem and recognition of his services be conveyed to Dr. Nyland and spread as a permanent record in our minutes.

Michigan State Board of Registration
in Medicine,

By: F. C. Warnshuis, Secretary.

Dated Jan. 6, 1930."

* * *

Re: Dr. Guy L. Connor, Detroit, Michigan.

By Dr. Brook, seconded by Dr. McLaughlin:

Resolved, That the following resolutions be adopted, spread upon our minutes, and a copy sent to Dr. Guy L. Connor.

Yeas: 9; Nays: 0.

Motion carried.

"To Whom It May Concern:

"The Board of Registration in Medicine, in special session assembled on January 6, 1930, learns of the expiration of the term of office of one of our fellow members, Dr. Guy L. Connor.

"Dr. Connor served as a member of this Board for a period of twelve years, of which five years record him as Secretary of the Board. Dr. Connor accepted the responsibilities of office and discharged the trusts that were reposed in him in a manner that reflected credit to himself and to the Board of Registration in Medicine. His executive services reflected a constant desire to enhance the activities of this Board and to maintain a high standard of supervisory control of the practice of medicine in this state. He gave of self, of labor, and of time, in order that the

accomplishments of this Board might better safeguard the health of the people of this state. Therefore,

Be It Resolved, That the members of the Board of Registration in Medicine tender to Dr. Guy L. Connor their sincere thanks and expression for the services he rendered in acquitting himself of the responsibilities reposed in him by the people of this state. And

Be It Resolved, That we send to Dr. Connor our hearty wishes for the continuance of his health and happiness and the assurance that we recognize the contributions he has made to advanced medical supervision in Michigan, and

Be It Further Resolved, That a copy of these resolutions be adopted, spread upon our permanent records, and a copy sent to Dr. Connor.

Michigan State Board of Registration
in Medicine,

By: F. C. Warnshuis, Secretary.

Dated, Jan. 6, 1930."

* * *

Re: Examiners and Committees for 1929-31.

The President announced the following committees and examiners to serve for the ensuing two years:

Registration and Standard Committee:

Dr. J. D. Brook, Grandville, Chairman.

Dr. Frank A. Kelly, Detroit.

Dr. W. H. Marshall, Flint.

Dr. W. Ellwood Tew, Bessemer.

Dr. T. G. Yeomans, St. Joseph.

Legislative Committee:

Dr. Frank A. Kelly, Detroit, Chairman.

Dr. J. D. Brook, Grandville.

Dr. J. Earl McIntyre, Lansing.

Dr. W. Ellwood Tew, Bessemer.

Dr. Charles A. Teifer, Muskegon.

Examination Committee:

Dr. W. H. Marshall, Flint, Chairman.

Dr. W. A. Lemire, Escanaba.

Dr. J. Earl McIntyre, Lansing.

Dr. Wm. F. English, Saginaw.

Auditing Committee:

Dr. W. A. Lemire, Escanaba, Chairman.

Dr. Charles A. Teifer, Muskegon.

Dr. W. Ellwood Tew, Bessemer.

* * *

Dr. Nelson McLaughlin—Physiology.

Dr. W. H. Marshall—Pathology.

Dr. Frank A. Kelly—Surgery.

Dr. J. D. Brook—Practice of Medicine.

Dr. J. Earl McIntyre—Obstetrics and Gynecology.

Dr. W. Ellwood Tew—Chemistry and Toxicology.

Dr. Wm. F. English—Histology and Embryology, Mat. Medica and Therapeutics.

Dr. T. G. Yeomans—Bacteriology; Eye, Ear, Nose, and Throat.

Dr. Charles A. Tiefer—Anatomy.

Dr. W. A. Lemire—Hygiene and Public Health, and Medical Jurisprudence.

* * *

By Dr. Yeoman, seconded by Dr. Brook:

Resolved, That the expenses of the Secretary incurred in the performance of his official duties, be approved.

Yeas: 9; Nays: 0.

Motion carried.

By Dr. McIntyre, seconded by Dr. English:

Resolved, That the expenses of the Board members, incurred while attending this special meeting, be herewith approved.

Yeas: 9; Nays: 0.

Motion carried.

Upon motion the meeting adjourned.

F. C. Warnshuis, M. D., Secretary.

Nelson McLaughlin, M. D., President.

Dated, Jan. 6, 1930.

Michigan State Medical Society,
1508 G. R. Nat'l Bank Bldg.,
Grand Rapids, Michigan.

January 8, 1930.

Dear Sir:

The Civic and Industrial Relations Committee of the Michigan State Medical Society call your attention to three questions which have been under consideration for some time. It is requested that you read this letter to your county society at the next meeting.

1. At the annual meeting of the State Society in Jackson, a resolution was adopted regarding industrial clinics. This resolution cited the fact that nurses and first-aid men, poorly equipped, lacking in experience and without proper training in medicine and aseptic technic, were far exceeding their authority in respect to the treatment of medical and surgical conditions among employes. Specific cases have been reported to this committee of nurses and first-aid men undertaking to do minor surgery. Amputations and suturing of wounds have been attempted and ailments of employes treated with medicines. Foreign bodies in the eye have been removed and even cocaine has been instilled. Instances have been reported where employers have reacted unfavorably toward physicians who have advised against such practice as being dangerous and illegal. This form of practice should be immediately discontinued as it is a direct violation of the Medical Practice Act of this state.

It is advised that county societies maintain a close contact with conditions in factory clinics through physicians engaged in industrial work. Educational measures should be undertaken with local Nurses Associations, Chambers of Commerce, Manufacturing Associations and employers, emphasizing the need of competent medical care for employes and advising them that such care should conform to the provisions of the Medical Practice Act and the Michigan Workmen's Compensation Law. Inability to secure co-operation of employers, nurses and first-aid men should be reported to this committee. The Secretary of the Michigan State Board of Registration in Medicine has promised his support in enforcing the law in cases where it seems to be indicated.

2. The soliciting of industrial work by underbidding contracts, is a practice that should be discontinued among the physicians. Each county society should go on record as disapproving such methods.

3. The appointment of a Civic Relations Committee is recommended for each county society. There is an apparent lack of civic interest among physicians and physicians' associations at the present time. Closer contact should be established with the public in order to gain their confidence and promote higher standards of medical practice in each community. The county medical society should be interested in civic matters as well as in medical welfare. The public should be urged to use physicians as speakers wherever advisable in programs involving civic enterprises and health education. Physicians should also be as interested in politics as the average layman and stand ready to serve the com-

munity, county or state whenever called upon. It is desired to establish active spokesmanship in the State Legislature by representatives from the Medical Profession. Each community has at least one physician qualified for such service. There should also be closer contact with Boards of Commerce, Parent-Teacher Associations and particularly Boards of Health.

Each county society should organize a permanent Civic Relations Committee, whose function shall be to take an interest in all worthy civic and lay activities; to study the merit of such activities and make interval reports of them to the Society; to provide a corps of qualified speakers available for service in all lay organizations in the community; and to offer the services of these speakers in local public programs whenever it is deemed advisable.

Respectfully yours.

HARRISON S. COLLISI, M. D.

Chairman, Civic & Industrial Relations Committee.

LUCE COUNTY

Following are the officers of the Luce County Medical Society for 1930:

Dr. R. E. Spinks—President.

Dr. J. T. Redwine—Vice president.

Dr. Geo. F. Swanson—Secretary-treasurer.

Fraternally yours,

Geo. F. Swanson, Sec'y.

MANISTEE COUNTY

I have to report that on December 5, 1929, the Manistee County Medical Society met at Mercy Hospital, in conjunction with the Mercy Hospital Staff.

The following officers were elected:

President—Homer A. Ramsdell, M. D.

Vice president—Ward Norcouk, M. D.

Secretary-treasurer—Kathryn M. Bryan, M. D.

Delegate—A. A. MacKay, M. D.

Alternate—H. D. Robinson, M. D.

The society went on record in the matter of advertising of itinerant doctors in the local paper as disapproving, and the Secretary was directed to so inform the local press.

Fraternally,

Kathryn M. Bryan,

Secretary-treasurer.

OAKLAND COUNTY

Dr. Burton M. Mitchell was elected president of the Oakland County Medical Society for 1930, during Thursday's dinner meeting at the Board of Commerce. More than 50 members attended.

Dr. C. A. Neafie and Dr. Isaac C. Prevette were re-elected to the offices of secretary and treasurer, respectively, while Dr. John S. Lambie was elected vice-president.

Three directors, Dr. Robert Y. Ferguson, Dr. Robert H. Baker and Dr. Frederick A. Baker, were selected also, while Dr. Charles T. Ekelund and Dr. Frank A. Mercer were elected delegates to the Michigan State Medical Society, with Dr. Frederick A. Baker and Dr. Nathan B. Colvin as alternates.

Following the dinner, memberships were granted to Dr. Edwin W. Blatter and Dr. Edmund D. Margrave of Royal Oak. The main address of the evening was presented by Dr. Willis S. Peck of the University Hospital, Ann Arbor, who discussed briefly "The Physiological Action of Physical Therapy Agents."

MARQUETTE-ALGER COUNTY

I wish to report to you the following meeting of the Marquette-Alger County Medical Society:

The annual meeting of the Marquette-Alger County Medical Society was held at Marquette, Michigan, on January 7, 1930.

At 5:00 p. m. the Delft Theater gave the society a complimentary showing of Davis & Geck's motion picture, "The Surgical Treatment of Peptic Ulcers." An invitation had been extended to the dentists and nurses of the two counties to attend this showing, and an audience of about 35 enjoyed the film. This attendance was considered unusually good in view of the condition of the roads in the upper portion of the state at this time of the year.

After the theater, the society enjoyed a roast duck dinner at the Hotel Marquette, and after electing the following officers for 1930 adjourned without transacting any further business to attend an unusually interesting hockey game:

President—Dr. W. A. Corcoran, of Ishpeming, Mich.

Vice president—Dr. S. Lojacono, of Morgan Heights Sanitarium, Marquette, Mich.

Secretary-treasurer—Dr. D. P. Hornbogen, of Marquette, Mich.

Delegate to State Society—Dr. V. Vandeventer, of Ishpeming, Mich.

Alternate delegate to the State Society—Dr. A. W. Hornbogen, of Marquette, Mich.

Sincerely yours,

L. W. Howe, M. D.

Secretary-treasurer.

BERRIEN COUNTY

The Berrien County Society held their December meeting on the 21st at the Four Flags Hotel in Niles. In spite of the storm and the impassable roads there was an attendance of 20. Election of officers was held with Dr. J. J. McDermott as President. Dr. E. W. Tonkin of Niles as Vice President, and W. C. Ellet of Benton Harbor re-elected Secretary and Treasurer. Dr. Ellet was also elected Delegate to the State Society.

The application of Dr. Dean Richman of Houghton County Society, for transfer to the Berrien County Society was received and on motion referred to the Membership Committee.

The scientific program was given by Dr. T. G. Yeomans. His talk was an interesting summary on "Controllable Spinal Anesthesia."

His results in a large number of cases, advantages in operative procedure, and excellence of post-operative recovery were the main points stressed. His technic modified after the Pitkin method was carefully explained and brought forth a very interesting and general discussion. In Dr. Yeoman's opinion this method is probably the safest and has the least number of contraindications of any of the present methods of anesthetization.

The Berrien County Society is very much pleased to have had such an interesting paper given by one of its members. Although spinal anesthesia is not a new procedure, yet previous methods have been risky and not always successful, and the development and perfecting of a new technic demands considerable fortitude from its pioneers.—W. C. Ellet, Secretary.

SHIAWASSEE COUNTY

Shiawassee County Medical Society was addressed by Dr. F. B. Miner, of Flint, at a meeting

held at Memorial Hospital, Owosso, Thursday, January 9, on Infant Care and Feeding. This society meets at a noon luncheon on the second Thursday of every month. Dr. Miner's address was practical and interesting. Some of the points made were that a new-born babe should not be given a water bath for at least 24 hours after birth, but an oil bath was much better. Neither should powders be used at first dressings, for the reason they are apt to cause irritation of the skin. Avoid too much clothing and keep the room temperature at about 70 to 72 F.

See that the air of the room is not too dry. On a cold day there should be sufficient moisture present to cause the windows to be slightly "steamy." Hot dry air of the nursery will cause perceptible shrinking in weight of a new-born babe. Feed every four hours, six feedings in twenty-four hours. If bottle-fed, give $1\frac{1}{2}$ to 2 oz. of raw $3\frac{1}{2}$ per cent B. F. milk for each pound that the babe should weigh, (not what it does weigh) and add a tablespoonful of Karo syrup to each feeding. At sixteen months, milk as a part of the diet should be limited to a pint per day, and the mother cautioned not to heed the advice of milk dealers as to how much she should give her babe. During the second year a stated diet should be laid down for the mother to follow. Cod liver oil is good for all babes though all do not need it. However it will do no harm in any case.

W. E. Ward, Sec'y-Treas.

HOUGHTON COUNTY

I wish to submit the following report of the Annual Meeting and election of officers of our Society for 1930.

The annual meeting and dinner of the Houghton County Medical Society was held Tuesday evening, January 8, at Miscowaubik Club, Calumet, Mich. Following a delightful turkey dinner at 7:00 p. m., the business meeting of the Society was held. Reading of minutes of December, 1929, meeting approved. Financial report of secretary showed a balance of \$88.93 for January 1, 1930. We had forty-two members for the year 1929 and an average attendance of 45 per cent at our monthly meetings. We had no deaths during 1929, and had 3 new members admitted. We lost 3 physicians by change of location elsewhere.

The following officers were elected for 1930:

President, Dr. W. A. Manthei, Lake Linden, Mich.

Vice president, Dr. G. C. Stewart, Hancock, Mich.

Secretary-treasurer, Dr. T. P. Wickliffe, Lake Linden, Mich.

Delegate to State Meeting 1930, Dr. H. M. Joy, Calumet, Mich.

Alternate delegate, Dr. R. B. Harkness, Houghton, Mich.

Censor for 3 year term, Dr. I. D. Stern, Houghton, Mich.

Committee on Public Health and Legislation, Dr. A. F. Fischer, Hancock, Mich., and Dr. R. B. Harkness, Houghton, Mich.

Meeting adjourned.

T. P. Wickliffe, Sec'y.

CALHOUN COUNTY

MINUTES

The annual business meeting of the Calhoun County Medical Society was called to order in

Room 106 of the Kellogg Inn. Dr. R. V. Gallagher presiding. The report of the Secretary-Treasurer was read and accepted, as printed in Vol. XII, No. 9, of the Bulletin. The Secretary recommended that the expense of the Society be budgeted, and it was moved that a committee be appointed by the President to prepare this budget and submit it at the next meeting. Carried. The following committee was appointed:

Dr. Harry B. Knapp

Dr. A. F. Kingsley

Dr. Joseph Rosenfeld

The minutes of the last regular meeting of the Society were read and approved. The following committee reports were received and read and placed on file:

1. Program Committee—A list of speakers who appeared before the Society was published in the current Bulletin.

2. Entertainment Committee—Through its chairman, Dr. T. Kolvoord, made a good report and recommended that a meeting be held in Marshall or Albion at least once next year.

3. The Public Health Committee, represented by its chairman, Dr. Hoyt, stressed the work of diphtheria prevention and urged the co-operation of all members.

4. The Necrology Committee's report was made by Dr. Kingsley, who reported on the death of a Past President, Dr. George Haynes, of Homer, which took place in 1929.

5. Dr. Estella Norman, chairman of public education, who was away on her vacation, sent the following report by telegraph:

"Absent on vacation. Regret exceedingly inability to attend meeting. During past year members of Calhoun County Medical Society have given over two hundred lectures for the laity reaching approximately twenty thousand people.

(Signed) "ESTELLA NORMAN,
"Chairman."

The following committees did not make a report:

Venereal Disease—Dr. Hoyt.

Illegal Practice—Dr. W. H. Haughey.

Anti-Tuberculosis—Dr. C. R. Hills.

Dr. C. S. Gorsline, chairman of the legislative committee, called attention to the very complete write-up of the work of the legislative committee of the state as published in the November issue of the State Medical Journal, and urged upon each member the need of reading it.

ELECTION OF OFFICERS

After declaring the session open for nomination and election of officers, the following is the result of the election:

For President—Dr. Wilfrid Haughey.

For Vice president—Dr. L. S. Hodges, Tekonsha.

For Secretary—Dr. H. B. Knapp.

For Delegates to State Society—Dr. C. S. Gorsline, Battle Creek, and Dr. George Hafford, Albion.

Alternates—Dr. W. S. Godfrey, Battle Creek, and Dr. W. F. Martin, Battle Creek.

Dr. Gorsline moved that the incoming administration be asked to form the skeleton of a Red Cross organization for emergency work in co-operation with the National Red Cross. Carried.

Dr. Gorsline also announced that members of the Society could still get the club rate on subscriptions to Hygeia for 1930, and urged all to take advantage of this offer.

Members present at the business session: Drs.

Baribeau, Dugan, Amos, Elliott, Gallagher, Godfrey, Gorsline, Hancock, Hoyt, Kingsley, Knapp, Rosenfeld, Selmon, Sleight, Van Camp, Barnhart, Cooper, Eggleston, Olson.

Meeting adjourned.

The annual dinner of the Society took place at 6:45, and some ninety members and their wives were seated at four beautifully decorated tables in the dining room. The eating of the dinner was accompanied by instrumental music by an orchestra. The meeting was presided over by Dr. Gallagher. Mr. Lawrence Meyer, accompanied by Mrs. Alta Drever, rendered two baritone solos, which were very well received.

The speaker of the evening, Dr. William S. Sadler, of Chicago, was introduced and spoke very learnedly on "The Doctor in Society and Business." His talk was listened to with exceptional interest, and while it was full of commonplace experiences, it was told with telling effect in stimulating thought and study into the possible future of medicine. Dr. Sadler, in referring to the status of the practice of medicine, said that from the handwriting on the wall it looked to him unless we "sawed wood" and every man got "on his toes," the time was coming that as free and independent doctors we would wake up and find we were "out of it." That the state medicine would commandeer the services of the physician, pay him a nominal salary, and the day of scientific progress would be over. This condition of affairs exists today in Europe, and has come about in spite of the great educational and clinical advantages of those countries. As doctors, we should stick to our job of healing the sick, but should also take interest in the public welfare and co-operate with all agencies having for their object the betterment of the people. He thought that the irregular healers were gaining in public sympathy and legislative prowess, and estimated that at least one-sixth of the people of this country only called on a physician for healing except in the greatest emergency. In spite of the higher class of learning and training of the present-day doctors, they are held in a higher degree of contempt by the public in this country than any country of the world. The irregulars and cults often inspire confidence in the patients because of the use they make of physio-therapy, a thing doctors have been too slow to make use of. Failure on our part to train technicians and assistants to work under our direction has given the opportunity to irregulars, which they are taking advantage of to a remarkable degree.

Medicine too often attracts to itself men who are not good business men, and they do not take economic advice readily. As a profession, we fail to recognize the state of public opinion, and we are unsuspecting victims of social revolution. Group practice solves some of the difficulties, but not all. It is estimated that 70 per cent of the public that frequent doctors' offices are neurotic, and need clinical psychology to help him get a proper viewpoint of life. Medical schools should teach more neurology, and every doctor should be able to psycho-analyze his patient.

The age is a fast moving one, and we cannot practice like we used to do. We should form all the contacts possible in social and political life, fight our way to the place where we can prevent, through public opinion, the state and government interfering with the free exercise of the healing art. We should check up on ourselves and co-operate in every honest method looking towards the

continual improvement in scientific medicine as a means of relieving suffering humanity.

Present at meeting, 105.

HARRY B. KNAPP,
Secretary.

KALAMAZOO COUNTY

SECRETARY'S REPORT FOR DECEMBER

The forty-sixth annual meeting was called to order by the president, Dr. Ward Collins, at 2 p. m. About 35 members were present.

Dr. Barrett reported for the Public Health Committee and expressed the committee's appreciation for the co-operation given by the Academy during the past year.

Other committees handed written reports to the secretary.

Election of officers.

Dr. W. E. Shakelton nominated Dr. J. C. Maxwell for president; Dr. A. A. McNabb moved that the rules be suspended and the secretary be instructed to cast a unanimous ballot in Dr. Maxwell's favor. Seconded and unanimously carried.

The nominating committee submitted the following names for other officers:

1st Vice President—Sherman U. Gregg.

2nd Vice President—R. P. Beebe.

3rd Vice President—A. A. McNabb.

Treasurer—Hugo Aach.

Librarian—Clara Unrath.

Censors—W. C. Huyser and W. E. Shackelton.

Delegates—F. T. Andrews and F. C. Penoyer.

Alternate delegates—L. H. Stewart and J. H. VanNess.

Dr. L. E. Westcott moved that the secretary be instructed to cast a unanimous vote in favor of the above named nominees. Seconded by Dr. Snyder. Unanimously carried.

Dr. F. T. Andrews called the attention of the members to the recommendation of the last house of delegates meeting that it was quite necessary that we have an active committee on Medical Education. He asked that special stress be given this point, and the new president's attention called to this matter.

The president's exaugural address by Dr. Ward Collins on "Intra-cranial Birth Injuries" was given while Dr. Hobeke took the chair. (An abstract will appear in the February Bulletin.)

F. A. Racette D. D. S. gave a very interesting discussion on "Orthodontia in relation to Medicine" and illustrated his talk with a number of models.

Richard Smith, M. D. of Grand Rapids, gave a very thorough discussion on the "End Results Following Operation on Carcinoma of the breast." His statistics were very well brought out by lantern slide charts.

The Annual Banquet given by the Upjohn Company to the Academy of Medicine and the Womans' Auxiliary was very well attended by both organizations. The music was excellent and the dinner most excellent.

Dr. Collins introduced Dr. Morter the toastmaster of the occasion who took full charge of matters by relating his intensive preparation for this important post, which includes a trip to Boston with one of the inmates of the State Hospital.

Dr. Caldwell gave the address of welcome for the Upjohn Company and invited us to visit their Medical Library.

The new president, Dr. J. C. Maxwell, was in-

troduced as was Mrs. Z. L. Gilding, the new president of the Womans' Auxiliary.

The feature of the evening was a talk by Dr. Smith Burnham on the "Growth of the Constitution of the United States."

All in all it was a day and evening enjoyed by every one.

PLEASE NOTICE

The secretary is taking this convenient and less laborious way of notifying the new committee members of their appointment.

The following is a list of the committees appointed by the president, Dr. J. C. Maxwell. Those named first under each committee are the chairman.

Program—C. L. Bennett; William Hoebeke, Louis Gerstner.

Clinical Program—C. E. Boys; R. J. Hanna, H. A. Eears.

Public Health—Elizabeth F. Barrett; John MacGregor, Wilbur C. Medill.

Anti-Tuberculosis—B. A. Shepard; G. M. Riley, L. V. Rogers.

Social Function—David E. Squires; D. C. Rockwell, Wm. R. Young.

Social Hygiene—C. A. Youngs; J. D. Stewart, F. B. Crowell.

Medico-Legal—Rush McNair; C. A. Barthomew, E. P. Wilbur.

Membership—A. W. Crane; Neil H. Goodrich, W. R. Vaughn.

Legislative—L. J. Crum; H. J. VanNess, W. P. Bope.

Public Education—J. B. Jackson; L. E. Westcott, W. E. Collins.

Your Public Health Committee wishes to report that a number of the members of the Academy of Medicine have co-operated with the University of Michigan in carrying out its Health Extension program. Health lectures were given last year and are being given this year in all of our Junior High Schools. The work has also been carried out in some of the nearby villages and cities.

Our per-school clinic sponsored by the local Parent-Teachers Association and the Child Welfare League was held last spring and an invitation was extended to bring in pupils of the County for examination.

A school clinic was held this fall at Knollwood, 75 were examined. About 200 of the students of the W. B. Kellogg Agricultural School were examined a week ago. Arrangements were made for an Educational program following the last clinic.

Instruction in sex hygiene was given in the Junior High Schools of our city.

Respectfully submitted,

L. V. Rogers

J. T. Burns

F. Elizabeth Barrett.

The medico Legal Committee respectfully reports.

During the year, three instances of illegal practice of Medicine have been referred to this Committee.

This Committee does not interpret its duty to be to institute prosecutions against an illegal practitioner; but does interpret its function to be to examine into such cases, and make recommendation to the Academy.

The Academy should take responsibility for any procedure against offenders.

While the cases referred to the Committee were

distinct infractions of the Michigan medical laws, yet sufficient proofs of same, were not forthcoming.

It must be taken into consideration that the public usually sympathizes with the accused, attributing to the profession the motive of jealousy.

Therefore prosecutions under the medical laws, must be proved and over proved.

During the year two suits of malpractice have been instituted against members of the Academy. Both suits, it now appears, are dying of their own inherent weakness.

It is to the credit of the Academy, that no member will lend himself to an unjust action against any other member.

Signed,

Rush McNair,
E. D. Sage,
J. E. Maxwell.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. L. J. HARRIS, President, Jackson, Mich.
MRS. J. EARL McINTYRE, Secretary, Lansing, Mich.

The first opportunity, in a big way, for the Woman's Auxiliary to the Michigan State Medical Society to meet our neighbors from other states, comes in June at Detroit. Our state president has been busy for several weeks trying to help perfect plans for a rousing meeting which will show something constructive and give our men folks some concrete idea that there is a real place for us in the activities of state and national associations as well as more local county affairs.

Memberships are increasing but not fast enough. Now is the time to start your local Auxiliary and have it in going condition before the June meeting.

Now you, Mr. Doctor, show this article to your wife or best girl or some one who will help us put on a wonderful meeting at Detroit, and be sure and see that the old car is working and that she gets there.

One activity of the Auxiliary which our husbands probably do not know even exists and which has been in existence for many years before the Auxiliary was even thought of, has to do with our co-operation with the various Boards of Health.

How many times have the wives been asked whether they thought the children should receive toxin antitoxin or should be vaccinated, what she thought of the Dick test? etc. Would it not be a good idea for the health officer of the state or in communities where there is a full time health officer, then such officer to get out a pamphlet once in a while, describing those treatments and the results obtained and also to be hoped for?

Many physicians' wives have been trained nurses, but many have not. Those who have had training, soon lose touch with medical advances and husbands are more likely to tell of the latest golf score or result of the bowling match than to give a description of those activities which become second nature to him.

Another work the Auxiliary could do is to see that "Hygeia" is placed in all schools, and see that the teachers make use of it in a way similar to nature magazines and others.

MRS. E. S. PETERSON,
Member of the State Board.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

BACTERIOLOGY FOR NURSES—Harry W. Carey, A. B., M. D., Assistant Bacteriologist Laboratory, Albany, N. Y. (1901-1903). Pathologist to the Samaritan Hospital, Troy, N. Y., Cohoes Hospital, Cohoes, N. Y. and Putnam Memorial Hospital, Bennington, Vermont. Third revised and enlarged edition. Illustrated with forty-three engravings and one colored plate. F. A. Davis Company, Publishers, Philadelphia, Pa. Price \$2.25.

HEMORRHOIDS—THE INJECTION TREATMENT AND PRURITUS ANI—Lawrence Goldbacher, M. D., Philadelphia, Pa. Illustrated with 31 half-tone and line engravings, some in colors. F. A. Davis Company, Publishers, Philadelphia, Pa. Price \$3.50 net.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month)—Volume 9, number 6. (Lahey Clinic Number—December, 1929) 188 pages with 51 illustrations, and complete Index to Volume 9. Per Clinic year (February, 1929 to December, 1929). Paper, \$12.00; cloth, \$16.00. Philadelphia and London.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month)—Volume 13, number 3. (New York number, November, 1929). Octavo of 272 pages with 58 illustrations. Per Clinic year, July, 1929 to May, 1930. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

APPLIED ELECTROCARDIOGRAPHY—By Parsonnet. The Macmillan Company, New York. Price \$4.00.

That interest in electrocardiography is increasing is shown by the great number of books on this subject which are appearing. Among those which have recently come from the press is the book entitled "Applied Electrocardiography" by Parsonnet and Hyman, which is very practical for the beginner, as it presents the subject in a simple and readable form. After a short description of the anatomical and physiological basis of the subject, the various machines at present on the market are mentioned, with an explanation of their operation. Following this, an account is given of the diseases of the pacemaker and the forms of abnormal rhythm. Sufficient electrocardiograms are given to thoroughly illustrate the subject and the purpose of the book is well carried out in making important material on this subject available for those who begin in this line of work.

THE NEWER KNOWLEDGE OF NUTRITION; the Use of Foods for the Preservation of Vitality and Health—By E. V. McCollum, Ph. D., Sc. D. Professor of Clinical Hygiene in the School of Hygiene and Public Health of the Johns Hopkins University, and Nina Simmonds, Sc. D. Illustrated, Fourth Edition, Rewritten. Price \$5.00. The Macmillan Company, New York.

There are few departments in medicine that are characterized by more active research than that of nutrition. The literature on the subject is voluminous, yet the above named authors have been able to produce a book of convenient size, approximately 600 pages, embodying the results of investigation necessitating the re-writing of the third edition of the work which appeared only five years ago. The Fourth Edition contains the recent discoveries concerning the etiology and treatment of the anemias; the dietary requirements of blood regeneration; the experience in recent years in the control of goitre through the provision of iodine; recent researches on the relation of diet to bone development, the calcification of fractures, as well as those on the prevention of rickets. There is an interesting account of ergosterol, the active principle of cod liver oil together with its therapeutic value.

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MENINGOCOCCUS MENINGITIS IN MICHIGAN*

J. E. GORDON, Ph. D., M. D.**

DETROIT, MICHIGAN

Periodicity of epidemics is a characteristic feature of communicable diseases. With certain infections, measles being typical, the interval between epidemics is so brief that the nature of the disease is constantly in mind. The same is true of scarlet fever, which is highly endemic, but subject to periodic increases of such degree as to reach epidemic proportions.

Conditions are different with epidemic meningitis. Some few cases, to be sure, are regularly reported in any densely populated district, but actual epidemics of the disease are widely spaced, roughly ten years or more, in this respect having analogy with epidemic influenza. Consequently, in the interim, clinical acuity in diagnosis becomes dulled. Appreciation of the fulminating virulence of the infection under epidemic conditions is blurred by comparison with sporadic mild cases of the same disease. Furthermore, a new generation of physicians encounters a disease, familiar from classroom instruction, but perhaps unknown from bedside observation.

The course and character of a given epidemic could formerly be predicted rather exactly from past experience. The remarkable development of modern transportation and industry have altered conditions to such an extent that new problems exist in the control of epidemics. For more than a year, meningococcus meningitis has occurred in Detroit and in other industrial centers of the state in sufficient degree to warrant the concern of physicians and health authorities. The wave has not yet exhausted itself. More cases were reported in Detroit during January, 1930, than in the corresponding month of the previous year, the first of the epidemic. This report is based on an experience with somewhat more than a fourth of cases reported

* From the Herman Kiefer Hospital, Department of Health, Detroit.

**Dr. J. E. Gordon is medical director of the division of communicable diseases at Herman Kiefer Hospital in Detroit. Undergraduate training at Northwestern University, and the University of Chicago. Ph. D. in bacteriology and pathology, University of Chicago. M. D. at Rush Medical College, University of Chicago. With the American Red Cross, Investigations on Epidemic Meningitis, 1918.

in Michigan in 1929. It is presented at this time in the hope that it may portray local conditions, and that the methods described may be of some value in the management of the disease during the period of increased seasonal frequency which may logically be expected during March, April and May.

THE CURRENT WAVE OF EPIDEMIC MENINGITIS

The year 1927 in Detroit was typical of meningitis under endemic conditions. Fifty cases were reported in the city, in essential agreement with the number during each of the previous five years. The case fatality at Herman Kiefer Hospital for patients treated that year was 23 per cent. The early months of 1928 had the usual scattered cases, but in April rather more cases than common were reported. This condition continued through May and June. Although the situation was by no means alarming, it was of sufficient import that the Department of Health issued a warning to the profession that epidemic meningitis was prevalent to an extent greater than normally expected.

During the summer, cases of meningococcus meningitis are not usually encountered. During each summer month of 1928 several cases were reported, a circumstance indicative of conditions that actually were to exist when the usual seasonal prevalence of this infection developed in the winter and spring. The number of reported cases increased materially in October, and continued during November and December. The outbreak was well under way in January, and thereafter the number of reported cases increased to a maximum of 158 in May. The frequency declined during the summer months. While cases were less numerous than in April and May, nevertheless, the number of reports of this disease was measurably in excess of the level of the previous summer. The report rate rose during the autumn months, and significantly, the apparent virulence of the infection as well, in that the proportion of deaths within 36 hours after admission to the hospital was greater than at any previous time. Indications are that the present wave will continue with measurable force during the next few months. During 1929, 1,859 cases were reported in Michigan, 868 of them in Detroit. Urban communities which escaped infection in 1929, may well anticipate its occurrence in 1930.

DIAGNOSIS OF MENINGOCOCCUS MENINGITIS

A rather striking characteristic of the epidemic of 1918 was a considerable proportion of acute fulminating cases. The epidemic largely concerned young adults under military conditions. Naturally, similar fulminating infections have been observed in this outbreak, as would be expected in epidemic times, but by no means with the frequency noted in 1918. Most cases have conformed to the ordinary form of the disease.

The fulminating type is marked by a sudden onset with intense headache, chills, and vomiting. Delirium develops early, is frequently violent and even maniacal, progresses rapidly to coma, and death occurs within 48 hours. Deaths within 24 hours have been noted in a few instances in current experience. The condition is primarily a septicemia, with manifest skin lesions of the usual petechial variety, but not uncommonly purpuric. Rigidity of the neck and of the spine is relatively slight. The fever not uncommonly is moderate, but may reach high levels. Prostration is extreme. Fortunately, these cases have been relatively infrequent in this epidemic.

The diagnosis of the fulminating type of epidemic meningitis is essentially the diagnosis of meningococcus septicemia. Its recognition is difficult except in epidemic times. Early diagnosis is essential if treatment is to offer any promise. The ordinary type of meningococcus meningitis likewise begins with a septicemic stage, and if diagnosis can be made then, and treatment instituted early, the results to be expected will be more promising. The clinical course of the ordinary form of the disease is essentially that of the fulminating, except that progress is not so rapid. What, then, are the clinical features which permit diagnosis in the early septicemic stage? Too great emphasis cannot be placed on the mode of onset which is inordinately sudden, in comparison with that of most infectious diseases. This sudden onset is characteristically initiated by chills and even rigor. There is an intense, throbbing, frontal headache of a degree rarely encountered in other processes. Vomiting soon follows. The temperature rises rapidly and has a tendency to be relatively high. There is general hyperesthesia and tendon reflexes are unusually active. The most impressive feature is the general aspect of the patient. He is definitely and acutely ill even within hours after the first noticeable symptoms. One of the earliest

physical signs which may be elicited is the loss of abdominal reflexes. In the presence of the symptoms noted a diagnosis of epidemic meningitis should be definitely considered. Careful inspection of the body surfaces, particularly that of the trunk, should be made at frequent intervals for the presence of pin-head sized, pink-red to blue-red petechial spots. They usually appear within 12 to 18 hours after onset. The diagnosis is then definitely made, although actual invasion of the meninges may not yet have occurred. We have repeatedly, in the course of this epidemic, performed lumbar punctures under such circumstances only to find the fluid absolutely clear, and cells numbering four to six. Treatment was instituted, and the diagnosis later corroborated by the finding of meningococci in blood cultures. In certain instances, infection did not progress beyond this septicemic stage. Without exception, involvement of the meninges was minimal. The course described has typified the usual onset. In perhaps one-fifth of instances, it was more gradual and involved two or three days before development of the symptoms mentioned.

In the absence of treatment in the early septicemic stage, the disease progresses to well-marked involvement of the cerebral and spinal meninges. The outstanding signs are then related to meningeal irritation. Petechiae may still be present, but they tend rapidly to fade. The neck becomes definitely rigid, and is usually accompanied by rigidity of the spinal muscles. Kernig's sign can readily be elicited, as can that of Brudzinski, flexion of the thighs upon extension of the head. Plantar reflexes as a rule are definitely positive with adults, with children commonly absent, as may be Kernig's sign. Indeed, stiffness of the neck may be the only evidence of meningeal irritation in very young children. The pupils are usually dilated and sluggish. Strabismus and nystagmus are irregularly present. The tache cerebrale and a bulging fontanelle are commonly noted in infants.

A fair prognosis is still possible if the disease be recognized in the early stage of meningeal invasion. If it progresses, so that there is well-marked opisthotonos accompanied by tremors, delirium, and even coma, with the process first recognized on the fifth or sixth day, the resulting fatality is unusually great, and in the present epidemic has been about 65 per cent.

Infection of the meninges with bacteria

other than the meningococcus can be distinguished clinically from true epidemic meningitis only with difficulty. Examination of spinal fluid removed by lumbar puncture is essential to establishment of the diagnosis. Lesions of the respiratory tract and particularly of the ear, should strongly indicate a secondary, rather than a primary meningitis. That evidence is, however, by no means absolute. A patient with suppurative otitis media of two months duration, with pneumococci demonstrable in the discharging pus, nevertheless had an actual meningococcus meningitis, the otitis media being merely an associated condition. It was more logical to expect a pneumococcus meningitis. That presumptive diagnosis was made, but culture of the spinal fluid revealed Gram-negative diplococci of Weichselbaum.

If the history of illness dates back four to six weeks, and there be definite symptoms of meningeal involvement, the diagnosis of tuberculous meningitis is rather definite. A most interesting and yet confusing group of cases numbering in all about 20, have, however, been encountered in the course of this epidemic. An illustrative case might well be of value because such instances are uncommon in present-day practice. A child four years old was received with the history of having been acutely ill six weeks previous to admission to hospital. She had indeed been critically ill, but gradually improved and had been up and about for the previous ten days. On a Friday, she again became acutely ill. On Sunday, all the clinical evidences of meningitis were present and she was admitted to hospital. The child was greatly emaciated. Spinal puncture revealed clear fluid with 80 cells per cubic millimeter. A definite web formed in spinal fluid allowed to stand over night. Cultures were negative, as was examination for tubercle bacilli. Clinically the disease conformed to tuberculous meningitis because of history, physical findings, and character of the spinal fluid. The diagnosis of tuberculous meningitis was made. A differential count of cells in the second fluid removed showed surprisingly 80 per cent polymorphonuclear leukocytes. Lymphocytes should predominate in the fluid of tuberculous meningitis. Subsequent cultures of the spinal fluid successfully demonstrated meningococci. The case was actually one of chronic epidemic meningitis with acute recurrence. Similar cases have been repeatedly observed. Identification

was only possible by differentiation of the type of cell in the spinal fluid, since the initial cultures were frequently negative. Repeated bacteriologic examination, particularly after serum treatment, has in every instance confirmed the true nature of the process.

Meningismus associated with various pathologic conditions, particularly the pneumonias, acute enteritis of childhood, and middle ear disease, may closely simulate epidemic meningitis. The absence of petechiae is significant, but with high fever and the appearance of acute illness, differentiation must usually depend upon examination of the spinal fluid.

During the summer, poliomyelitis was not uncommonly confused with meningitis. The less rigorous onset, absence of indications of severely acute illness, and most important, the development of paralysis serve to indicate the true nature of the process.

In general, one should be skeptical of the diagnosis of epidemic meningitis in persons more than 40 years of age. If there is definite pathology of the central nervous system, it is more likely dependent upon some type of circulatory disturbance or chronic infection, notably syphilis.

The following table includes patients reported during the epidemic as meningococcus meningitis, the final diagnosis made, and serves to illustrate the conditions which may suggest meningitis. (Table I.)

TABLE I
DIFFERENTIAL DIAGNOSIS OF MENINGITIS

Disease	Number of Cases
Meningococcus Meningitis	409
Mumps	1
Scarlet Fever	2
Lobar Pneumonia	17
Tonsillitis	4
Pfeiffer Bacillus Meningitis	6
Enteritis, Acute	6
Mastoiditis, Acute Suppurative	1
Tuberculous Meningitis	20
Nasopharyngitis	20
Measles	1
Hysteria	2
Traumatic Injury of the Spine	1
Streptococcus Meningitis	14
Cerebrospinal Syphilis	3
Cerebral Hemorrhage	5
Pneumococcus Meningitis	2
Diphtheria	1
Hydrocephalus	1
Bronchopneumonia	7
Poliomyelitis	18
Osteomyelitis	1
Cerebral Thrombosis	2
Lichen Urticatus	1
Acute Bacterial Endocarditis with Cerebral Embolism	1
Metastatic Abscess of the Brain	1
Tetany	1
Spastic Paraplegia	1
Erythema Multiforme and Bronchopneumonia	1
Acute Appendicitis	1
Suppurative Otitis Media	2
Empyema of the Pleural Sac	1
Eclampsia	1
Encephalitis, Epidemic	3

THE TREATMENT OF MENINGOCOCCUS MENINGITIS

No appreciable progress was made in the treatment of this disease until the development of a specific antimeningococcic serum. It was early demonstrated that efficient results with the serum depended upon its injection intraspinaly, in order that it might come directly in contact with the infected meninges. Drainage of spinal fluid by lumbar puncture precedes administration of serum into the canal. This must be performed slowly, since sudden release of pressure may be attended with untoward symptoms. The amount of serum injected is always less than the total volume of spinal fluid removed. The difference should be at least 10 c.c. The amount of serum is governed in a measure by the age of the patient and in general conforms to the following schedule:

1 to 5 years— 5 to 10 c.c.
5 to 10 years—10 to 20 c.c.
10 to 20 years—20 to 30 c.c.
Over 20 years—30 c.c.

always with the reservation previously noted that a smaller volume of serum be injected than that of fluid removed. Whether the serum be given by gravity or syringe is of no great consequence provided the injection is given slowly, and the serum be previously warmed. It is of advantage at successive alternate treatments, to turn the patient first on one side and then on the other to facilitate proper drainage of the ventricles. Frequency of serum treatments must be judged by the requirements of the individual patient. Those of average severity require serum every 24 hours for 4 days. Seriously ill patients, the majority under epidemic conditions, should have two treatments a day for perhaps the first two days. With extreme malignancy, serum is given every eight hours for the first day.

The regularity of a septicemic stage of cerebrospinal fever, so ably demonstrated by W. W. Herrick during the epidemic of 1918, quite naturally gives indication for the use of the specific serum intravenously, in combination with the intraspinal method. Blood cultures made early in the course of the disease have consistently revealed the infectious agent in the circulating blood. At Herman Kiefer Hospital, serum is given intravenously to all patients admitted within the first three days of illness, and to those of a later stage if petechiae are noted in appreciable numbers. In the absence of petechiae a blood

culture is taken. Serum is given by vein the next day if meningococci are demonstrated. The results, judged by case fatality, have been definitely better by 25 per cent for patients treated by the combined method, compared with a control group treated by the intraspinal route alone.

Methods of administering serum intravenously have been revised several times during the course of the epidemic. Our original method, which proved so successful with endemic cases, involved a single dose of 30 c.c. to 50 c.c. on the first day of treatment. In the early days of the epidemic, the case fatality mounted from less than 25 per cent to approximately 65 per cent under precisely the same plan of treatment, an apt illustration of the effect of *genus epidemicus*. With such discouraging results, it seemed reasonable to increase the amount of serum intravenously, since the amount possible by the spinal route is necessarily restricted. Larger doses were given and repeated on each of the first three days. The total amount of serum per patient was essentially doubled. No improvement in result was noted. We returned to our original procedure of one intravenous injection, followed by repeated intraspinal injections, with the single variation that the amount given intravenously was relatively larger, 50 c.c. for children and 100 c.c. for adults. Judged by case fatality the results were definitely better. In all circumstances serum by the intravenous route has been given by gravity, diluted with four to five volumes of physiologic saline solution. This method permits slower transfusion of the serum, thus adding a factor of safety, and in addition has the advantage of restoring water balance, these patients frequently being dehydrated.

There is a well recognized hazard with uncontrolled administration of horse serum by vein. Skin tests for hypersensitivity must precede such treatment, and if hypersensitiveness be demonstrated, desensitization is required before injecting the serum. A further and rather definite safeguard against untoward reactions consists in delaying serum intravenously until four hours have elapsed after the initial intraspinal treatment. The time lost is felt to be more than compensated by the added factor of safety, since the patient by this method automatically desensitizes himself. This is the procedure now routinely practiced at this hospital.

In connection with reactions attending serum therapy, too little recognition is ac-

corded the fact that next to serum given intravenously, the greatest risk is with intraspinal injections. Skin tests are as requisite a part of this procedure as with intravenous therapy. A positive test requires preliminary desensitization. It is always desirable, even with a negative test, to give 0.5 c.c. intraspinaly, and with the needle in the lumbar space wait five minutes before proceeding with the full therapeutic dose.

Since the last epidemic of meningitis, a new method of approach to the subarachnoid space has been developed. Puncture of the cisterna magna has been demonstrated to be practicable in man, and while attended with dangers theoretically greater than with puncture of the lumbar space, the technic may be developed to an extent that little risk attends. The usual spinal puncture needle is inserted just beneath the occiput, through the dura, and into the cisterna magna. Meningococcus meningitis is primarily a basal meningitis. If serum is injected into the cistern, diffusion over the base of the brain would appear much more readily accomplished than when it is given in the far removed lumbar space. This epidemic has afforded the first opportunity to apply this method to the treatment of a significant number of cases. More than 250 patients have been so treated at Herman Kiefer Hospital, and sufficient experience has accrued to permit worthwhile evaluation of the method. The technic was first employed when block of the lumbar space developed, making necessary some other method of relieving pressure and administering serum. Cisternal puncture was substituted for alternative tapping of the lateral ventricles. The results were so satisfactory that the method was introduced as a routine part of the management of all cases. The results have more than justified expectation in decreasing the case fatality and in obviating complications of the older methods of treatment, particularly spinal block. Our experience with cisternal puncture in epidemic meningitis will be presented in greater detail in a subsequent report.

In summary, the general scheme of serum therapy in meningococcus meningitis as practiced in this hospital includes an initial lumbar puncture for diagnosis and administration of serum. In about four hours a single large dose of serum is given intravenously by gravity, well diluted with normal salt solution. After eight to ten hours, serum is injected into

the cisterna magna. On the morning of the second day serum is given after lumbar puncture, in the evening by the cisternal route. If additional serum is required thereafter, a single daily injection by the lumbar route usually suffices.

Serum treatment is discontinued when the spinal fluid becomes clear or when meningococci can no longer be demonstrated in spinal fluids of two successive punctures. The number of cells is no criterion in itself for judging duration of treatment. The number may continue relatively high because of meningeal irritation induced by the presence of the foreign serum. The general condition of the patient and particularly the behavior of the fever curve, are not to be neglected in determining the necessity for further treatments.

No technic of administration, however carefully applied, compensates for an inadequate serum. After a year's contact with the current epidemic, during which more than 600 cases were under observation, my final opinion must resolve into an admission that serums now available have failed to produce satisfactory results. In this epidemic the case fatality rate has been unusually high. This was true when the older accepted methods of administering the serum were followed; to a lesser extent, but still definite, with what are felt to be improvements, notably the method of alternate lumbar and cisternal puncture. Serums from practically all the larger commercial laboratories have been used at one time or another during the epidemic. Some were definitely without effect, others gave fair results, while two were apparently of greatest merit, although themselves disappointing, judged by case fatality. The best result has been obtained by alternating these two serums, using first one and then the other, as spinal punctures were repeated. Efficiency of serums, judged by clinical result, does not necessarily parallel agglutination titer.

Certain manufacturers are now incorporating in the antigen used for injecting horses, strains of meningococci isolated during this epidemic. It is to be hoped that this will result in a more effective serum. Explanation of the unsatisfactory results with available serums would seem to rest in the demonstration that cases in this epidemic were due to a Type III meningococcus, one of the intermediate groups, members of which vary immunologically. Potency for Types I and II ordinarily re-

ceives greatest emphasis in the preparation of antimeningococci serum.

Certain difficulties may complicate the treatment of acute meningitis. Although such occurrences are uncommon, it is essential to be informed of possible measures of attack when indicated. The formation of a thick plastic exudate may prevent adequate drainage, and thereby prevent injection of sufficient serum. At times it is impossible to obtain more than a few cubic centimeters of spinal fluid from young children by lumbar tap. Under certain circumstances, organization of pus may lead to actual block of the subarachnoid spaces. When this occurs, methods other than lumbar puncture must be instituted in order to continue with treatment. Cisternal puncture is of particular value in such instances. Rather rarely block of the cisternal region may occur as well as lumbar block. Drainage of the lateral ventricles either through the open fontanelle in infants, or after trephination in older persons, may then be necessary. A great deal can be accomplished in the presence of plastic exudate or actual block by irrigation of the subarachnoid space with warm normal salt solution. Simultaneously, needles are introduced by lumbar and cisternal puncture and irrigation accomplished by introduction of the solution through one needle and drainage by the other. A new method based upon work by Kolmer in secondary meningitides, is worthy of trial in epidemic meningitis in which there is reason to suspect organization of pus in the cerebral subarachnoid spaces, or as an alternative procedure for ventricular puncture. This consists in injecting serum in the common carotid arteries. It is thus transported directly to the affected areas of the cerebral meninges. Another method which has proved of value in cases of extreme septicemia, particularly when horse serum is not well tolerated, consists in transfusing whole blood from a person recently recovered from meningitis to the acutely ill patient. This method of immunotransfusion has given brilliant results with scarlet fever, and apparently has a place in the treatment of meningococcus meningitis as well.

PROGNOSIS

Few diseases offer greater difficulty in prognosticating the outcome of the individual case than does meningococcus meningitis. Moreover, that is the one bit of information that the relatives of the pa-

tient want. It is the information a physician must possess in order to guide intelligently the management of the patient. There is a time for conservatism; another for radical measures. While it is impossible to form an intelligent prognosis of any individual case of meningitis, there are, however, certain general averages, and the presence or absence of various clinical features, which may intelligently guide such opinion.

Without doubt, in the present epidemic one of the important factors which determines the ultimate outcome of the case is the age of the patient. The fatality for young adults has been notably high. The results with children have been, by comparison, relatively good. The fatality for infants under one year was high, 57.1 per cent, but not as great as might have been expected from experience with this age group in other epidemics. The rate of 36 per cent for children aged one to four is satisfactory for meningitis in an epidemic period. Patients from five to fifteen years of age had the lowest fatality of any age group, a bit more than 25 per cent, and this is good for meningitis at any time, epidemic or endemic. After the age of fifteen years, the case fatality rate progressively increased from 43.6 per cent, at ages fifteen to nineteen, to 65.8 per cent for older adults aged thirty to thirty-nine years. The gross fatality for 431 cases of all ages was 43.2 per cent. Age, then, is an important factor in judging prognosis. (Table 2.)

TABLE 2
MENINGITIS DEATHS BY AGE GROUPS

Age	Cases	Deaths	Case Fatality Percent
Under 1 year	14	8	57.1
1-4	86	31	36.1
5-9	72	13	25.0
10-14	57	16	28.1
15-19	62	27	43.6
20-29	83	50	60.2
30-39	38	25	65.8
40 and over	11	4	36.4
Total	431	186	43.2

EXAMINE GERMS FOR SOURCE OF ERGOSTEROL

Search for sources of ergosterol, from which vitamin D may be obtained, has led scientists to examination of certain micro-organisms. However, the search so far has not met with success. Non-disease-producing cultures of the tuberculosis organism did not contain any ergosterol when examined by Paul S. Prickett, C. N. Massengale and Warren M. Cox, Jr., of the research laboratories of Mead Johnson and Co. On the other hand, the cultures of the organisms grew equally well when both activated and unactivated ergosterol had been added to them. The activated ergosterol used in the experiment had a potency 250,000 times that of cod liver oil. This would seem to indicate that activated ergosterol has

Certain laboratory findings are of prognostic import. In general, the lower the cell count at the first spinal puncture, the better is the prognosis. Counts of 10,000 or less per cubic millimeter had a fatality of 39 per cent. This advanced to 44 per cent for those with 10,000 to 20,000 cells, and the fatality rate increased in direct proportion to the cell count, so that if 40,000 or more cells were present at the first puncture, the fatality was 88 per cent. Meningococci can usually be demonstrated by direct smear preparations from the spinal fluid. Actual isolation in culture is less regular, but does furnish prognostic information. Patients with positive cultures had a case fatality of 42 per cent; those with negative cultures, 28 per cent.

Finally, the earlier treatment is instituted, the more favorable is the probable outcome.

METHODS OF CONTROL

The first essential in the control of this disease is recognition of the infected individual who must be isolated until such time as the naso-pharynx is free from meningococci. Two successive cultures from this region can usually be obtained in about one week after fever subsides. In Detroit the immediate contacts of the patient are quarantined until two successive cultures, taken at least 24 hours apart, are found to be free from meningococci, or until a period of 14 days has elapsed from the date of exposure, providing the patient has been removed to hospital. Otherwise quarantine of contacts coincides with that of the patient.

There is no specific prophylaxis against meningitis. Young children are most susceptible, but multiple cases seldom occur in the same family. Parents are urged to keep young children from crowded places and to see that their personal hygiene of rest, food, and out-door play is normal and not excessive.

no germ-killing power, although it is a potent substance which can prevent and cure rickets.

Since ergosterol is a sterol and closely allied to the lipid fraction of a material, the possibility of the tubercle organism, which contains about 50 per cent lipid fraction, being a source of ergosterol led to its examination, the bacteriologists explained.—Science Service.

*If I had time to find a place
And sit me down full face to face
With my better self that cannot show
In my daily life that rushes so,
I might be nerved by the thought sublime—
If I had time.*

THYMOPHYSIN IN OBSTETRICS*

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In April, 1928, I gave a preliminary report on "The Use of Thymophysin in Obstetrics" before the Detroit Obstetrical and Gynecological Society. This article was published in the Michigan State Medical Journal* in July, 1928. In that, this report was the first and as far as I know, the only report on the use of Thymophysin so far published in this country, and in that, some of the members of this society may not be familiar with the preparation and its action, a hasty review of the above mentioned article may be advisable.

Thymophysin is a combination of the extract of the hypophysis and the extract of the thymus gland. To Temesvary goes the credit for the experimental work; and he was able to show that by the injection of this preparation into an animal, normal uterine contractions were stimulated rapidly and rhythmically. Later several obstetricians in Central Europe began using this preparation in their clinics with surprisingly good results. They found that they were able, in the majority of cases, with its use to excite and strengthen labor, and at the same time preserve its physiological character; and that the birth could be accomplished in a shorter period of time and yet in a more satisfactory and normal manner than it was possible to bring about by any other means.

Our first work was started about three years ago and our first report gave the effects noted in fifty cases. Our conclusions were that "the new preparation was particularly successful when given to cases of inertia, in the first stage of labor; that the injection of thymophysin caused strong and continued labor pains which led to spontaneous delivery or to complete cervical dilatation where surgical intervention was possible in a comparatively short time." At that time our work led us to believe that "the effect was less regular in other stages of labor and that the work so far showed it to be harmless to both mother and baby."

Since 1926 the interest in this medication has increased and I am reliably informed that at the present time in Central Europe over 50 per cent of all hospital and clinic cases are given thymophysin during some stage of labor. It is also being used extensively in England and Italy. It is

always intensely interesting to follow the work of different men in the different clinics working with a new, but the same preparation, and to note their conclusions. So it has been with thymophysin.

Graff in Vienna, has been convinced that its chief use is in the dilatation period, and that when thymophysin is given in the expulsion period there is noted but slight strengthening of the labor pains. In the latter period he believes that other preparations, such as piturin, are just as satisfactory. He has noted the fact that thymophysin has a place in aiding in the differential diagnosis between labor pains and pregnancy pains. Graff's list contained 270 cases, practically all of which received thymophysin in the first stage, with excellent results.

Liebe, on the other hand, in an article published from Berlin, says that the use of this preparation in the dilatation period seems advisable in but few cases. His observation was that there was scarcely any difference in the action of thymophysin and other hypophysin preparations in this stage. He continues as follows: "We use thymophysin chiefly up to the present time, in secondary labor weakness; in the expulsion period, and very often not until the end of this stage of labor, when a hastening of the birth is indicated upon the cessation of pain." Liebe's list was made up of 84 cases where thymophysin was given in the second stage for inertia and in only one case was it without satisfactory result.

Demuth, writing of his experience with this preparation at Prague, has had the best results using it in the first stage, but continues, "We have tried thymophysin also in other stages of labor, and with good results, especially in the expulsion stage. At this time the tetanic contraction of the uterus often caused by hypophysin preparations is as undesirable as in the primary stage, especially when the head of the child has not yet entered deep

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enough into the pelvis. The rhythmic contractions ensuing from the thymophysin injection often make the use of the forceps unnecessary." Demuth's series consisted of 150 cases and the use of this preparation in both the primary and secondary stage was very satisfactory.

We wish now to report our results after using thymophysin in 500 cases. All but a small per cent of them were delivered in two of our obstetrical hospitals in Detroit and practically all have been under the direction of nine men whose work is limited to obstetrics and gynecology. I mention these facts to show that we have been able to review 500 charts in which careful notes have been made as to the different points of interest in the action and use of this preparation.

In presenting this relatively large number of cases in a limited time it is possible to make only a few rather general classifications and then report the results of the most important points, in figures. Following along the same outline as presented in the preliminary report we have made four classifications according to the indications for the use of thymophysin. Namely, first, primary inertia, second, secondary inertia, third, induction of labor in toxic cases, and fourth, induction in non-toxic cases. It is interesting to note that 232 primipara and 268 multipara (from two to eight) make up the total number.

We have the records of 341 cases coming under the head of primary inertia. Among these there were 46 which personally I believe should be classified differently as I failed to find in the case record proof of an inertia. However, this particular point will be mentioned again. There were 216 of these which had a rapid spontaneous delivery following one or more doses of thymophysin. The time element and dosage will also be discussed later. Ninety-eight of the total number of cases of primary inertia had a rapid complete dilatation where surgical intervention was possible but did not deliver as a result of the injection alone. In this classification we have recorded 27 failures. In the above list of successes were 21 which had previously received oil, quinine, and in some cases minute dose of pituitrin without bringing about delivery. There were 63 cases of posterior position and breech presentation, many of these falling in the 96 group where surgical intervention was made possible in a much shorter time because of more rapid complete dilatation.

Under the second classification we have listed 83 cases following the injection of thymophysin. Sixty-four of the secondary inertia group had an early delivery. Twelve of the remaining charts contained notes to the effect that the injection was helpful. This list was made up of posterior and breech presentation and the position of the presenting part was so changed that surgical intervention was possible in a short time following the thymophysin. Seven cases in this group did not respond to the injection.

There seems to be no apparent explanation for these seven failures or for the twenty-one in the first group. A careful analysis of the records shows that they all had a dose corresponding in amount to all the others. Also, in some instances the dose was repeated one or more times.

We have 35 records of induction of labor in toxic cases. In our preliminary report we mentioned the fact that in a small number of toxic cases thymophysin acted beautifully in about 50 per cent when given to induce labor, and that we believed further experience along this particular line would prove interesting. In the present series it proved successful in inducing labor in 21 cases out of the 35. In 13 of the 21, thymophysin was used alone and in 8 it was used following oil, oil and quinine and a warm enema, and in several instances after minute dose of pituitrin. However, in all of these 8 cases which are included in the 21 successful ones the usual methods had not produced the desired results as uterine contractions were not present when the injection of thymophysin was given. We wish, however, to have it clear that these other ecbolics had been previously used and that there may have been some dilatation present even though no uterine contractions were noted in this group of 8. In 7 cases thymophysin was used along with other means. Oil and quinine was used first and this was followed in from one to two hours with the injection of thymophysin. Seven cases failed to respond and the bag or bougie methods had to be resorted to.

We have used thymophysin to induce labor in 41 non-toxic cases. The indications given for induction of labor in this series included overtime pregnancies, placenta previa lateralis, and death of the fetus. It was used in 10 cases alone and in all of these no lasting contractions were noted. In 31 cases thymophysin was used in conjunction with oil, quinine and a warm enema. Excellent results were noted in

21 cases. Ten did not respond to the injection and the bag or bougie was used.

In the past 12 months, particularly, we have been more interested in the last two groups. Previous to this we had felt pretty sure of our results of induction of toxic cases. The latter already have some uterine stimuli present in the blood stream and labor is not so difficult to stimulate. There has seemed to be a great need for some added help in the induction of labor in the non-toxic group. Our series again shows that thymophysin is useless when injected alone. On the other hand, we have been delighted with the results when thymophysin is used with other agents, and believe that further experience along the same line will be of added interest.

A summary of the above figures shows that 280 cases of inertia gave prompt response and rapid delivery following the injection of thymophysin. One hundred and ten others dilated promptly and were delivered early with surgical assistance; 34 of the inertia cases are classified as failures. In the induction cases, 21 were successful. In 28, thymophysin was helpful for early delivery in combination with other methods, and 20 were recorded as failures. Therefore in a total of 500, 301 were successful. One hundred thirty-eight gave satisfactory aid and 61 were failures.

A comparison of our results with the other men mentioned earlier in this paper is rather difficult. In the great majority of their cases thymophysin was used alone, so that the action of this particular preparation might be determined. In our larger series we have used it more as one of several agents to bring about certain results. In 169 cases it was used in conjunction with other agents. Also, where several men are directing the cases, there is not the same uniformity of indication for its use, or time of injection or uniformity of dosage, or the same uniformity of decision for repeated injections. I wish also to say at this point, that while in this country up to the present time we have used thymophysin only when certain indications are present, in Europe the only indication needed is that the woman is in labor. In other words, they are now using it with the definite idea of shortening the time of labor.

I feel there are several factors which should be mentioned to explain, or rather, to elucidate our large percentage of failures. Experience has taught us that many of our early cases should have had repeated injections when contractions became weak

at the end of an hour, following one or even two small doses. Also, during part of the time covered by this work the potency of the preparation when received by us was low. In several shipments it was found to be as low as 25 per cent. Undoubtedly the length of time taken for distribution in this country had affected the potency of the preparation. I am informed that this feature has now been entirely corrected and that each ampoule from now on will have the last date for use printed on the ampoule.

One of the most interesting problems has been the determining of the dosage. The original ampoules contained two and two-tenths cubic centimeters and for more than one year we gave this amount at one dose. Later we found that many patients received the same effect with one cubic centimeter, and that those who did not show the desired result with a smaller dose could have the injection repeated one or more times as necessary. More recently one-half cubic centimeter has been found satisfactory in a number of cases. In the induction cases where thymophysin is used with oil, quinine and enemas the best results are obtained when one-fourth c.c. is given every thirty minutes for from four to six doses. The manufacturers are now supplying this preparation in one cubic centimeter ampoules.

We have given then, thymophysin in doses ranging from several minims to two and two-tenths cubic centimeters in this series. We have noted that some women have more reaction from one-half than others have with 2 c.c. It is a well known fact the different patients react very differently to hypophysin preparations; therefore I believe it wise to give a small dose, as a test dose, to a patient first, and watch the reaction before deciding on the size of the second dose.

Personally, I have never seen any of the alarming results with the use of pituitrin after many years of experience with it. However, such reports appearing, as they do now at intervals in our literature, make us realize that any preparation containing pituitrin must be used with care. Therefore in this paper I want to inject a word of caution in the use of thymophysin. I do not believe it to be a preparation with which we can claim, as yet, sufficient experience to give it to the general practitioner and the man doing home obstetrics, to use promiscuously. I most heartily condemn the obstetrician who, when being told over the phone by the interne that his

obstetrical patient has just entered the hospital, instructs the interne to give her an ampoule of thymophysin, saying that he will be there in fifteen or twenty minutes. Many patients having a dilatation of four or five centimeters, receiving one c.c. of thymophysin, will be delivered in 20 minutes and the attending man should be present when the injection is given.

In analyzing the records of the cases previously noted under the classification of primary inertia, I find that the history of the case, the total time of labor and other factors, would make doubtful the correctness of the diagnosis of primary inertia. I am of the opinion there are about 45 in which thymophysin was used simply to hasten labor. I wish again to sound a note of caution in the use of this medication and ask for it the same care as is used with any ecbolics; for in the future if any bad effects are to be reported from its use, it undoubtedly will come from cases in which good judgment and the usual care have not been exercised. On the other hand, the use of thymophysin should not be too long delayed after a state of inertia has been diagnosed, for, as has been pointed out, the earlier in labor it is used, before the uterine muscle has been entirely tired out, the better the result. It was demonstrated many times in our work that the proper dose, at the proper time, made unnecessary repeated injections.

We have gradually developed, with experience, a fixed idea as to when thymophysin should and should not be administered. Muller and DeCampo were able to show in experiments with animals that thymus extract had the effect of hindering exhaustion only when the muscle is not already exhausted. If a patient has been in hard labor from 12 to 24 hours, when other uterine stimulants have been given and failed, then thymophysin will probably fail also. In such cases a morphine and scopolamin rest is advisable. Then, as contractions begin again, an injection of thymophysin is almost certain to produce satisfactory results in a relatively short time.

As has been suggested in articles by Temesvary, Graff, and others, we also have found thymophysin most satisfactory in its effect on a uterus when that organ is already irritated or sensibilized. For this reason we recommend that in the induction of labor it should be given with oil, quinine and enemas. Our results prove conclusively that when used in this manner many cases which do not start labor with the above named agents alone have

a rapid and satisfactory termination. Many of us have also experienced difficulty at times in inducing labor with a bag and bougie. Thymophysin is a great help in these cases and should be given in one-half c.c. doses at 30-minute intervals beginning about two hours after the placing of the mechanical stimuli.

In the German literature we have found it mentioned a number of times, where the initial large dose of two c.c. was given, that some effect was noted on the fetal heart even before the effect was discernable on the uterine muscle. This effect, however, was described as of short duration, and no cases of asphyxia have been recorded.

We have never been able to determine any change in the fetal heart following the injection of thymophysin. All cases which have received this medication coming directly under my own supervision, have been examined with great care following delivery and four and six weeks post-partum for any damage to the cervix. I have not found any condition which differed from the findings following other deliveries. None of my co-workers have reported any ill effects found at post-partum examinations.

There have been but two instances called to my attention in the years covered by this work where other than the usual reactions, as have already been described, have been questioned and I wish to report these now.

The *first* is a case included in our primary inertia group and is recorded as one of the failures.

Twenty minutes following the injection of 1 c.c. of thymophysin with a satisfactory increase of labor pains, a rectal examination was done and a diagnosis of complete dilatation made. The patient was taken to the delivery room and the membranes ruptured manually. A breech was presenting, a foot was brought down and delivery undertaken. It was then noted that the cervix had contracted and was so tight about the neck of the baby that several incisions in the cervix were necessary to complete the delivery. A note following the above dictation by the attending physician was as follows: "The question in mind is whether or not the thymophysin caused a spasm of the cervix."

The *second* case was a para three, at term, with a blood pressure of 190 systolic. Because of the latter, she was given castor oil and quinine but without results.

The second day she was again given castor oil, quinine and six, three minum doses of pituitrin. A rather slow labor was started and after five hours one c.c. of thymophysin was injected. Within a few minutes the uterus developed tetanic contractions and ether was given. The delivery progressed and a live baby was born spontaneously without lacerations. The above verbal report was given me by the obstetrician in charge of the case and this was his first experience in using or seeing the action of thymophysin.

In none of our cases was there mention made of excessive flow following delivery of the placenta. However, this fact has been noted in one of the German articles. The flow was described as not alarming and was controlled readily with the injection of pituitrin. The above represent all of the ill reports of which I have read or heard during this work, and I have been in correspondence with a rather large number of men throughout this country and Europe who have had an experience with thymophysin ranging from one to several hundred cases each.

The question has naturally been raised whether or not it is safe to use this extract in cases of eclampsia or threatened eclampsia where the blood pressure is very high. We have found, with others, that blood pressure is either not effected, or in some cases actually shows a decrease. Temesvary declared in a recent article that "It appears certain that thymus extract partially or entirely paralyzes the blood pressure increasing effect of the pure hypophysin extract."

We have not the time in this paper to go into many details which have been most interesting to us while reviewing the records. However, without attempting to compare the cases which have received thymophysin with other similar cases without the injection, we wish to just make the following observations. From three to twelve minutes (most often the former) following an injection a decided change is noted in the intensity and regularity and length of time of uterine contractions. Many cases were delivered in thirty minutes and the great majority before the end of one hour following the injection. The average time of labor was seventeen and one-quarter hours, which certainly must show a decided decrease of the usual time when we consider the large number of primipara in the series and the fact that all cases had present some factor to delay the labor or thymophysin would

not have been indicated. It is readily seen that this time, noted as the average length of time of labor in our cases, must not be compared with the average length of time of labor given in articles by the European workers. They give three to four hours as the total length of labor and they are using thymophysin to shorten labor in all cases, the normal as well as the abnormal, while our cases are practically all complicated. All writers seem to agree that this extract is not indicated in the third stage of labor.

To summarize, we wish to give our observations and experience with thymophysin as follows:

In both primary and secondary inertia thymophysin is an excellent means of stimulating labor.

In toxic cases, even when used alone to induce labor, given in the proper dose and at the proper time about 60 per cent go into labor.

Used in conjunction with our usual means for the induction of labor, thymophysin adds greatly to the successful termination in non-toxic cases.

High blood pressure is not a contra-indication for its use.

We advise an initial small dose to test the individual, of one-half to one c.c., and then to repeat the dose when and if necessary.

Although personally we have not seen any bad results to the mother, they have been suggested; and although we have not noted any harmful effects on the baby, even with big doses, they have been noted; and we advocate the careful use of this new and very helpful agent in obstetrical work.

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DISCUSSION

Dr. R. W. Alles, (Detroit): I think Dr. Haynes referred to me when he said I had some untoward experience with thymophysin. I will recall a case and will retell the events as closely as I remember them. The woman was 5 cm. dilated. She was a multipara and was having good pains. Her pains gradually died down. She had what I

deemed was a secondary inertia. I decided to give her thymophysin. Not having heard Dr. Haynes' word of caution I gave her 2.2 c.c. of the original preparation, Temesvary's preparation. Labor was quickly resumed and the uterus went into a tetanic contraction and the woman was very uncomfortable. She started to scream. Ordinarily she was a very quiet patient and having delivered her before I knew she had always gone through very well without much fuss. We gave her ether to control the contractions. I remained at her side and at no time did I find a complete relaxation of the uterus as we ordinarily observe. She was delivered within a short time, something like fifteen minutes or a half hour was the time it took to go up to a dilation from 5 cm. to complete and the head came down to the perineum, when the baby was born. The baby was delivered in fair condition. I couldn't determine that any damage had been done. Since then I have been very cautious in the administration of such preparations and I haven't seen any further results like that.

I now do as Dr. Haynes advocates and when the use of such preparation is contemplated, I use small doses and increase them as necessary.

Dr. W. C. Ellet, (Benton Harbor): I would like to ask Dr. Haynes what his experience has been in cases where there is a premature rupture of membranes and where the cervix isn't quite rigid, does it seem to efface any easier?

Dr. Harold Miller, (Lansing): I would like to ask Dr. Haynes the effect of heat on thymophysin in obstetrics, that is, ordinary atmospheric pressure or any heat in the room. He stated that in their observation they found an increased number of cases of postpartum hemorrhage. In the cases of cervical tears or bleeding were the cases normal or was there an increased number of cervical bleeding cases? Also, I would like to know the extent of the effect of thymophysin injection, that is following delivery. Also, whether rectal analgesia could be used along with the administration of thymophysin. I see that he states in Europe they depend on about three to four hours for a normal delivery and I am wondering if rectal analgesia could be used at that time or would he not recommend that?

Dr. Harry M. Nelson, (Detroit): We had a dozen ampules of it and used it in the production of labor. We gave it because we thought that our results were no different from those with pituitrin and castor oil. I have had no such experience as Dr. Haynes.

Dr. Lewis E. Daniels, (Detroit): Our experience with thymophysin has been very limited. One of the cases that Dr. Haynes spoke of I think was mine. The patient was a para-3 in which we induced labor and while I thought the uterus went into a tetanic contraction it may only have been the beginning of a strong contraction due to thymophysin, which it probably is in many cases. I listened for the fetal heart at the time I thought the uterus was in a tetanic contraction and couldn't hear it. I expected to get a dead baby and gave ether. But the baby was alive and it required a little resuscitation after which it came around all right. In one other case, a very recent case, there was another patient whose membranes had ruptured three days before the onset of labor. One c.c. of thymophysin was given after twelve hours of labor. The labor began twelve hours before the injection and the cervix appeared to be quite rigid. The dilatation was only about two to three c.c. and there had been no progress for several hours.

After injecting the thymophysin the patient delivered in 55 minutes. The dilatation came on very rapidly. The contractions were stimulated and came close together. The result in that case was a quite happy one.

Dr. Byerline, (Detroit): We have been using it. I recall one case where I think it resulted in some cervical laceration. This patient was a multipara, had about 5 c.c. of dilatation with the head stationed at zero. She was given one cubic centimeter of the thymophysin and within a very few minutes violent pains ensued. As I recall it, delivery occurred within ten minutes. At the time she was examined for discharge the cervix was found deeply lacerated. Of course, we do not know how the cervix was when she was admitted, but her previous delivery had been spontaneous and from the history I didn't find any reason to believe that her cervix had been lacerated before.

Chairman Henderson: I have had considerable experience in using thymophysin. Many of the cases that Dr. Haynes has reported are my cases. While we have been guided by the fact that pituitrin was introduced as a panacea for all the ills of obstetrics and used in very large doses, much larger doses than we are using at the present time, that point has made us much more conservative in our doses of thymophysin, and much more careful in our method of approach in studying the drug so that I do not know whether thymophysin is dangerous, and if so, whether we will have the ill effects reported from that which we had following the use of pituitrin.

I remember very well, even before I received my degree, of hearing one of the Detroit doctors telling about 108 obstetrical cases in which he had used pituitrin for 107. He didn't say how much work he had given the gynecologist. Undoubtedly, he had given him considerable work as a result of that method.

The result of such indiscriminate use of pituitrin has caused many good men to decry the use of pituitrin at all before the uterus is empty. Thymophysin has come into use with us with that in our minds and we have used much smaller doses than we used of the pituitrin. The original dose recommended was an ampule. We have quickly cut that down to a half and then one c.c.

As Dr. Haynes has suggested, we try out the patient to see what a half c.c. will do. If that isn't satisfactory the repetition of the dose is one c.c. instead of the half. In this way we have avoided what probably would have been a large number of cases of very severe convulsive contractions as a result of the use of the drug.

I had an experience as recently as this morning. A multipara called me up at 4 o'clock. I saw her at 5 with three c.c. dilation and very weak. She had had two babies with a history of long labor each time. A half c.c. of thymophysin increased the strength of her contractions so that within forty minutes she was delivered. While the forty-minute labor was rather hard still it was quite normal, as far as labors go. It was speedy, that was all. I am sure there were no ill effects in the cervix. I have examined many of these patients afterward and as far as I can see the cervix looks no different following the careful use of thymophysin than it did following the ordinary type of normal delivery.

Dr. Lewis E. Daniels, (Detroit): I would like to ask Dr. Haynes when he closes the discussion if he will draw on the blackboard the graphic effect of the contractions. Perhaps he was going to do that anyway.

Dr. L. W. Haynes, (Detroit—Closing discussion): It is rather unfortunate, I think, that this sectional meeting is just at the same time as the American Obstetrical and Gynecological meeting in Memphis. Dr. Temesvary is in this country and is addressing that meeting just about at this time this afternoon. He would have been here with us and would have talked about this work if it were not for that fact.

We had the pleasure the early part of last week of having Dr. Temesvary in Detroit with us for three days. His story of how this preparation started is most interesting. Dr. Temesvary is a young man, only thirty years old, and he is the chief of the Obstetrical Hospital of Budapest. He told me, in detail, of his difficulty in making an extract of a thymus gland. There were many of the German scientists who laughed at him at first and told him they weren't even sure the thymus was a gland of internal secretion and that it probably was not possible to make an extract of this gland.

After one year's work trying out different methods he finally succeeded in getting an extract which gave him the results he wanted. The injection of the thymus extract does not give the rapid and early results that the pituitrin does. In this combination of the pituitary extract and the thymus extract, the first minute or minute and a half of action is that of pituitrin. Soon after that follows the action of the thymus gland, which is the one thing, in itself, which causes a rhythmic and natural, more natural, contraction of the uterine musculature. This has been proven definitely in animal work.

Dr. Temesvary told us that in central Europe they had now used this drug in over 100,000 deliveries. They had not had any bad results. It is very interesting to hear him describe the effect that it has on the man when he sees his first case, where he sees it used in the first case.

I was glad to hear Dr. Daniels say that maybe this was not a tetanic contraction. I feel sure it wasn't. As he has more experience and sees it used in other cases I am sure he will find that the stimulus is so very definite that you are afraid it is going to be tetanic but with further use you find that it does not go into that state at all. It simply stimulates a normal uterine contraction and therefore a normal labor.

I want to speak a word about this to let you know that we have been trying to produce such a combination of drugs in this country. It seems too bad that we have to depend upon a foreign product. I spoke about it and also about the time that it takes to get to this country and the further time that it takes to distribute it over this

country. One of the men told me this morning that he had had a dozen ampules on his shelves for some six weeks and he said he felt by the time the drug was used the potency of it was probably pretty low.

Two pharmacists in this state have been trying to make this combination for the past year. They have not been able to perfect a preparation which will give us the same results with the animal experimentation or in our clinical work. The explanation for that is, I believe, that they have the preparation entirely too pure. In other words, the thymophysin shows a 46 mo. total solids per c.c. Temesvary undoubtedly is leaving something in his preparation that our pharmacists are taking out, that is the necessary thing to give us the desired results.

Dr. Daniels has spoken about the second case which I mentioned, where they thought there was tetanic contraction. The first case was one which I learned of yesterday. It was not on our record. That case was a syphilitic case and showed a 4+ Wassermann and had recent repeated injections of salvarsan and other usual anti-syphilitic treatment. That may have something to do with the action of bringing on a contraction of the cervix. Personally, I believe there was some other factor which had to do with that condition and that it was not the result of the thymophysin.

Dr. Miller asked several questions, one was about postpartum hemorrhage. I mentioned in the paper that we have never seen any postpartum hemorrhage. Only one was reported and that was by some European writer who said the hemorrhage was not a severe one and that it was readily controlled with an injection of pituitrin. There seems to be no effect whatever following the delivery. As soon as the expulsion stage is over the uterus contracts down as it would without the injection. We have never seen any difference at all following delivery.

Regarding the rectal anesthesia, or analgesia, Dr. Temesvary was very much interested in that particular medication because they do not use it at all in Europe. He has had no experience with it. In none of these cases that I reported, the 500 cases, was it used so I am not able to answer that question as to whether or not they could be used together satisfactorily.

When the membranes are ruptured early that is one of the indications for the use of thymophysin. You have a slow leak of the amniotic fluid and you know your case is going to go into labor then thymophysin is used. Your uterine musculature is already sensitized, irritated, and the thymophysin works beautifully in those cases.

TRY TO TOUGHEN SKIN AGAINST X-RAY DOSES

Experiments to toughen the skin or decrease its sensitivity to X-rays, which are being made in the hope of increasing the amount of radiation used for treating tumors of the body, were described by Dr. Edith H. Quimby and Dr. George T. Pack of New York City, at the meeting of the Radiological Society of North America at its recent annual convention in Toronto.

In treating deep tumors by radiation, either X-ray or radium, the rays must pass through skin and normal tissues before reaching the diseased ones, Dr. Quimby explained. The amount that can be used in treatment is limited by the amount the skin will tolerate. This amount is frequently not enough to have the desired effect on the tumor. One method that gave satisfactory results was

that of using combinations of different types of radiation in treating cases, rather than relying on a single type. The method was checked by the use of physical instruments which measured accurately the constancy of the radiation dose given. The effects produced on the skin with a constant quantity of radiation were estimated in 100 tests. It was found that it took one-third more radiation to produce a mild effect on the skin when both hard and soft X-rays and hard and soft radium rays were used in equal proportions than when either one alone was used. This demonstrated a real increase in skin tolerance which could not be explained on purely physical grounds, Doctors Quimby and Pack concluded.—Science Service.

INDICATIONS FOR OPERATIVE TREATMENT IN ACUTE TRAUMATIC MYELITIS DUE TO FRACTURE OF THE SPINE*

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It is the consensus of opinion at the present time that no regeneration of nerve tissue takes place in the spinal cord and the brain after injury. It would, therefore, be futile to undertake any operative measures in cases where one is reasonably sure that the cord is completely damaged at a given level. It is very difficult to make a diagnosis of complete transection of the cord for the first few days. We have to depend on various clinical and laboratory procedures in order to help us to arrive at a sane conclusion. Of these the most important are the X-ray findings, the results of neurological examination and spinal fluid pressure determinations.

X-rays are of extreme importance in cases of acute traumatic myelitis due to fracture of the spine. It is true that the cord may be completely damaged without much bony change in the spinal column or a dislocation at the time of injury may

slip back into position, giving a false impression on the film. But in the majority of cases X-rays show definite pathologic changes involving the spinal column in patients with traumatic myelitis. Fracture dislocations of cervical vertebrae are brought out and if the dislocation is sufficiently severe, a diagnosis of complete transection of the cord may be arrived at. In other cases the extreme angulation and distortion of the vertebral column is fairly good evidence that the canal is obliterated and the cord thus damaged (see Figs. 1 and 2). It is surprising, however, to note the most bizarre distortions not associated with complete destruction



Figure 1.

This is to show a fracture-dislocation between the fifth and sixth cervical vertebrae. It is noted that the spinal canal is practically completely obliterated.

* This paper represents some of the conclusions derived from a study of 72 cases of fractured spine with cord injury, at the University Hospital, Ann Arbor, Mich. The author expresses his indebtedness to Doctors Hugh Cabot, Carl D. Camp, Preston M. Hickey and M. M. Peet for their interest in this work and placing at his disposal the facilities of the surgical, neurological and the X-ray Departments.

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Figure 2.

This is to show a compression fracture of the 12th dorsal vertebra. There is much angulation and displacement of vertebrae at the site of injury. This patient showed complete anesthesia and paralysis below the level of injury lasting throughout her entire stay at the hospital.

of the cord. For instance (Fig. 3), Case 213909 was in an auto accident May, 1927. Immediately after the accident he showed no signs of paralysis! In his case there were no sphincter disturbances. About ten months after injury he was normal in all respects excepting a feeling



Figure 3.

This shows a fracture dislocation between the 2nd and 3rd cervical vertebrae. This patient showed no paralysis after the accident (see text).

of coldness and numbness in the left lower extremity. Examination showed definite limitation of motion of the head in all directions. There was some sensory dissociation in the left leg. A diagnosis of slight pressure against the spinal cord on its right lateral aspect at the site of the fracture-dislocation was made.

In the majority of instances such an extensive dislocation would presuppose complete transection of the cord.

The lateral exposure film of Case 195728 (Fig. 4) shows much angulation at the site of fracture. Displacement of vertebrae and much distortion of the vertebral canal are noted. She had sensation in the lower extremities and the bowel and the bladder functions were normal!

The above cases illustrate the point that to depend on X-rays alone is folly. They are of much help in our diagnostic and prognostic procedures but they should be considered in association with other meth-

ods of clinical and laboratory investigation.

The neurological examination of the patient is of paramount importance. The extent of sensory changes and motor manifestations should be studied. Paralysis of bowel and bladder should be looked into, the condition of reflexes, vasomotor disturbances, etc., should be investigated. In the majority of concussion cases there is return of sensation in a few hours (at least in part). Motor return of function is much slower. With a severe damage of the cord there is complete anesthesia and motor paralysis to the level of injury lasting over 24 hours. This has been true in the majority of the cases in this series. For instance, Case G-19861 (Receiving Hospital, Detroit), was examined about 36 hours after injury and showed a complete anesthesia and motor paralysis to the level of the sixth cervical spinal segment. X-rays were indicative of a fracture dis-



Figure 4.

This is to show the rays of a patient who had slight sensory changes in the lower extremities and much voluntary motor control. Note the amount of angulation. With positive neurologic findings this case could have been taken for one of very severe injury to the cord.

location between the fifth and sixth cervical vertebrae. Diagnosis of very severe cord damage was made. Patient died without any operative intervention. Autopsy showed a complete transverse liquifaction of cord at the level of injury.

It is our opinion that a complete anesthesia associated with motor paralysis lasting over 24 hours in cases of myelitis due to fractured spine is strong evidence in favor of very severe cord damage. We should guard against one fallacy. In a certain number of cases proven to have complete transection at autopsy a return of sensation to the uppermost level of anesthesia has been noted and this may be explained on the basis of a receding edema and swelling of the cord, thus enabling the last pair or two of spinal nerves above the level of injury to carry on their function. Such a course may give one the impression of amelioration in the patient's condition which is erroneous.

Spinal fluid pressure determinations are of extreme diagnostic value and a worthy addition to our diagnostic procedures in traumatic myelitis (Coleman, '25). A subarachnoid block in these cases may be caused by (1), edema of the cord, (2), pressure against the cord and its membranes by fractured pieces of bone, and (3), by a combination of 1 and 2. The test has been very dependable in this series. In three cases where subarachnoid block was demonstrated operation was performed and showed definite bony pressure against a non-pulsating cord. In two others where there was no subarachnoid block the patients were treated conservatively and the results were very gratifying, indeed. The changes in pressure after straining, coughing, deep breathing, may be within normal limits, but pressure on the jugulars almost invariably brings out the block if it is present (Fig. 5). The results vary from no change on jugular compression to delayed rise and fall in cases with subarachnoid block. In a case with subarachnoid block and neurological signs of impaired cord function a decompressive laminectomy is indicated particularly in patients with thoraco-lumbar junction pathology.

By operation it is proposed that the following may be accomplished: (1), bony pressure against the cord may be relieved; (2), by relieving the swelling and edema of the cord the further disintegration of cord substance at the site of injury is most probably checked; (3), in cauda equina lesions with severance of nerves the latter may be sutured. A decompressive laminectomy is exactly what the term implies. It is not intended to cure damaged cord, but it proposes to save as much of the undamaged portion as possible. Thus, granted the lesion does not sever the cord com-

pletely, granted there are signs of edema and pressure against the cord (subarachnoid block, X-ray findings), a decompressive laminectomy is indicated. In general this is a good rule to follow, particularly if the lesion is in the thoracic or lumbar regions.

Cervical lesions are quite a problem for treatment. In the first place sudden death in the absence of a plausible explanation

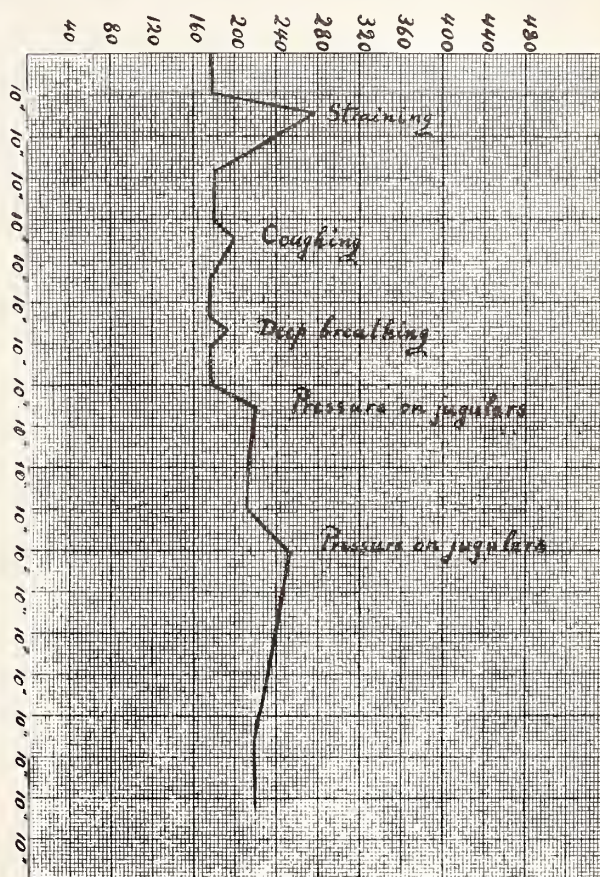


Figure 5.

This is to show the spinal fluid pressure changes under various conditions. It is noted that jugular compression gave the most positive results.

is a feature of such pathology. In the second place closed forced reduction is a possibility. It is the only portion of the spinal column that will respond favorably to such treatment. Taylor ('24), Langworthy ('30) discuss closed forced reduction in fracture-dislocation of cervical vertebrae. Taylor's method with some modifications is essentially as follows: The patient is placed on the table with the face toward the ceiling. The shoulders are immobilized against shoulder rests. Forceful traction is applied on the head while assistants steady the body by counteraction on the lower extremities. As soon as the neck muscles are fatigued (10-15 minutes of traction) the operator manipulates the

neck and effects reduction under the fluoroscope. Anesthesia may be necessary in some cases. Decompressive laminectomy is a serious undertaking, particularly if there is extensive cord damage. The swollen and edematous cord may herniate through the dural incision with further damage. It is advisable in these cases, if the operation is performed, to flex the head posteriorly while the dura is being incised, in order to remove the tension of the dura on the cord (this may minimize herniation of cord substance). The mortality in cervical lesions is very high (Frazier '18, Lanworthy '30 and others). In this series there were 8 deaths in a group of 12 acute cases of fracture dislocation of cervical vertebrae. Of the living four, two were treated conservatively, one has laminectomy and another survived closed reduction. With such a terrific mortality it is wise to be watchfully conservative. The study of rays, spinal fluid pressure, and the clinical condition of the patient should guide the surgeon.

In the thoracic and lumbar regions the problem is definitely different in that unexpected deaths do not occur frequently and closed reduction is certainly not the method of choice. Here operation may be undertaken with greater confidence (Elsberg, '18 and '28). In the present series there are 22 cases of thoraco-lumbar involvement. Of these, 5 were pronounced inoperable, a conclusion derived from X-ray and clinical findings. Three died without operation, 3 were left alone. Ten were operated on after careful study. Of the operated group, one died of fulminating pyelonephritis and two died within an hour after operation. The seven who survived did well. There was practically complete recovery in two cases before discharge from the hospital. There was marked improvement in three cases, one case recovered bladder control soon after the operation. The condition of one patient had not materially changed at the end of about six weeks. It is interesting to note that in all the operated cases pathologic changes were observed on the table.

The laminectomy performed is as much for decompressive purposes as it is to remove correctible pathology. It should be performed carefully and the laminae removed practically in their entirety. The cut ends of bone should be carefully smoothed. It is a question whether the dura should be incised in every case or not. A great deal depends on the judgment of

the operator and hard and fast rules cannot be laid down. The dura can certainly be incised with no injury to the arachnoid. It is important to make the dural incision long enough to give the cord the best possible decompression and eliminate the possibility of herniation and secondary damage. In case the subarachnoid pressure is very slight the dural opening may be closed, but frequently this has to be left open. Subarachnoid leakage is practically impossible if the arachnoid membrane is intact and even if it has been damaged with careful many-layer-closure, leakage is minimized tremendously.

SUMMARY AND CONCLUSIONS

1. No regeneration of nerve tissue takes place in the spinal cord or brain after trauma.
2. In case of complete transsection of the cord no operation is indicated.
3. Operation in these cases is for purposes of decompression and removal of remediable pathology. It can do nothing for the damaged portion of the cord, but may help spare the undamaged part.
4. It is impossible to absolutely diagnose complete transsection of the cord clinically in cases of traumatic myelitis due to fracture of the spine.
5. Complete anesthesia and paralysis to a certain level, lasting over 24 hours, is evidence of very serious damage to the cord.
6. There may be some return of sensation to the uppermost level of anesthesia in the course of 24-48 hours or more in cases of complete transsection of the cord. This should not be mistaken for amelioration. It is probably due to a receding edema of the cord above the level of injury and return of function to the last one or two pairs of spinal nerve above this level.

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PRESENT STATUS OF TREATMENT OF JOINT TUBERCULOSIS

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Tuberculosis of the joints has decreased greatly in the United States during the past twenty years. It is of two types, the human and the bovine. The principal factors in the decrease of the disease are the control of the infection in both types. The bovine infection has been largely reduced by the activities of boards of health who have insisted on the destruction of diseased animals, and upon the pasteurization of milk supplies, thus largely eliminating the sources of infection. The human type of infection has been reduced by the better popular knowledge of the dangers of transmission of the disease from open cases, and by the better isolation of such cases. Thus our children are now being protected very largely from the invasion of both types of tubercle bacilli, and their better general hygiene has made them more resistant to it when it is present. In spite of these facts tuberculous joint disease in children is all too common, and it behooves us to be constantly on the lookout for it, if we are to prevent untold suffering.

As in cancer, the most important point in tuberculous joint disease is early diagnosis. If diagnosis is not made at the earliest possible moment, permanent deformity can rarely be prevented, unnecessary bone destruction cannot be avoided, and the general health of the individual is needlessly undermined. Unfortunately, early diagnosis is not always an easy matter for the following reasons. The onset is almost invariably insidious and the primary symptoms and signs are very often so slight as to attract little attention. They are, too, subject to remission which may easily be mistaken for complete disappearance. Because of the habit, common to all parents, of attributing all childish pains and aches to injuries or falls, no attention is paid, in many cases, to the early signs of the disease. Thus it often happens that no physician is summoned until the trouble is far advanced. The great emphasis laid on the connection between joint pains or "rheumatism" and infectious processes such as tonsillitis, has centered the attention of our profession on these conditions, with the result that, too often, physicians make a diagnosis of rheumatism when they are really dealing with an early tuberculosis. The X-ray, our standby in so many conditions, is of little use and in fact it may be absolutely misleading through its negative showing, which may

lull us into a false sense of security. This is so, because there are no changes in the X-ray appearances until the disease is well advanced; that is, until calcium absorption or actual bone destruction has taken place.

An everpresent consciousness of these facts will keep us constantly awake to the dangers lurking in all cases of joint symptoms in children, and we shall use every method of differential diagnosis, before we say that any given case is not tuberculous. Certain broad general rules will help us greatly. Some of them are the following. When a child complains of pain in the region of any single joint for more than a few days, the possibility of tuberculosis should always come into our minds. If X-rays show no fracture and there is no history or sign of a severe injury, and if there is no sign of involvement of other joints, it should be assumed that the joint is tuberculous, until the contrary can be proved. The early tuberculous joint always shows protective muscular spasm; that is, motion in all directions is limited to a greater or less degree. Pain caused by tuberculosis is often referred to another nerve distribution. Frequently the first sign of tuberculosis of the hip is pain in the region of the knee. Tuberculosis of the spine often first manifests itself by pain or fatigue sensations in the legs. "Night cries", the expression of pain during sleep are of the greatest significance. Their occurrence is due to the relaxation of muscle spasm which, during the working hours, protects the sensitive joint. Rest usually brings relief from pain. The recumbent position will relieve the irritability of the child who has early tuberculosis of the spine. A splint will relieve the pain of a tuberculous wrist, elbow, ankle or knee more promptly than in other infections. A low degree of heat, swelling, local tenderness, and body temperature are typical of tuberculosis as opposed to the higher degrees in other common infections.

If the foregoing statements are kept in

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mind it is highly improbable that there will be failure to make a positive diagnosis of early tuberculosis. A few non-tuberculous joints may be considered as tuberculous without harm to the patient. If they are not kept in mind many tuberculous joints will be missed, and the advantages of early treatment will be lost.

Early efficient treatment is essential because it prevents deformity, and because it builds up the body resistance against the invasion of the infection. It prevents bone destruction in so far as it is possible to prevent it and tuberculosis is essentially a bone destroying disease. Such efficient treatment is based entirely on rest and protection from trauma of the affected joint and good hygienic surroundings. The rest and protection must be complete; the hygiene perfect. In the small joint plaster of paris fixation is satisfactory. In the large one, such as the hip and spine, recumbency on a fixation frame or splint is absolutely necessary. Hygiene must include large amounts of sunlight and open air as well as good food. The substitution of the various forms of artificial light, such as the mercury vapor quartz, or arc light, have not yet been proved in any way satisfactory. They may help to fill in on the stormy days, but they do not compare to free exposure to the outdoor air and sun. These facts have been proved most conclusively at the Convalescent Home of the Children's Hospital of Michigan, at Farmington. We still hope for an efficient substitute for the sun, but we have not as yet found it.

In the vast majority of cases, tuberculosis first attacks the epiphysis of the growing bone. The bacilli are carried there by the blood stream. Thence the disease spreads to the cartilage and synovia. The existence of cases of purely synovial joint tuberculosis is problematical. Usually the epiphyseal bone focus is the starting point. Undoubtedly unusual resistance on the part of the patient occasionally confines the disease to that focus, and the joint itself is not attacked. Such cases are found at autopsy or in the dissecting room, but they are rarely diagnosed in life, because they do not give rise to symptoms referable to the joint. When the infection has spread to the cartilage or synovia, permanent impairment of joint function is inevitable. Our treatment must be aimed at the reduction of this impairment to the minimum. In the smaller joints the impairment may be slight, because fibrous adhesions form and limit the motion, but

do not completely disable it. In the larger joints these fibrous adhesions are not sufficiently strong to resist the daily shocks of average life and guarantee permanent cure. They may be sufficiently strong to resist trauma and thus keep the disease quiescent for months or even years, but ultimately they give way and a recrudescence of the disease occurs. This fact accounts for the chronic invalidism of the average sufferer from joint tuberculosis. The only guaranty of permanent cure in disease of the hip, knee, spine, shoulder or elbow lies, then, in a firm bony ankylosis. In some cases nature accomplishes this after years of effort. Unfortunately, however, it is rare that patients can be kept under efficient observation and treatment sufficiently long to bring about this ankylosis, with the joint in useful position. Most frequently when the ankylosis does occur it is in bad functional position: for example, a hip flexed and adducted, or a knee flexed at right angles. Even in these bad positions bony ankylosis is rare, the usual status of the old tuberculosis of the hip, knee or spine being that of a joint deformed, often dislocated and held only by dense fibrous tissue. Theoretically, if it were possible to keep joints infected with tuberculosis at complete rest, under ideal hygienic surroundings for a sufficient length of time, bony fusion in good position would occur and a permanent cure be obtained. Practically in the average case this treatment can be carried out only long enough to obtain the desired result in the smaller joints. In the larger joints it can only be accomplished occasionally in highly specialized institutions, where all family and other considerations are subordinated to this one purpose. For instance, seven cases of tuberculosis of the spine have remained well without deformity after from three to five years of nearly ideal conservative treatment at Farmington, for periods exceeding two years, but all these cases show firm bony union of the diseased vertebrae in the X-rays. No case of hip or knee tuberculosis treated conservatively at the same institution has yet shown this satisfactory termination.

It becomes apparent then that ankylosis of a fibrous type in the small joints and of a bony type in the large joints in good position is the goal toward which we must strive in our treatment. It may well be asked, then, why accent the necessity of early diagnosis? The answer is plain. Early diagnosis allows the prevention of deformities, it allows the maintenance of

good general health in the patient, and in many cases the avoidance of abscess formation. Tuberculous or "cold" abscesses are in themselves harmless except for the pressure which they sometimes make on surrounding tissues. If they open spontaneously, or if they are opened ignorantly, they become, through secondary infection, a menace to life. If they are left alone they will frequently absorb. If they must be opened because of their size or because of the danger of rupture, the operation should be performed through sound skin at a distance from the abscess under the most careful aseptic technique. The opening is usually best done by repeated aspiration by means of a moderate sized needle or small trocar. If they must be opened by incision, they should be emptied, washed out and then closed tight in layers.

So far, then, we may summarize the conservative treatment of tuberculous joints as follows: early diagnosis, complete fixation, perfect hygiene, prevention of deformity and prevention of infection in "cold" abscesses, with the hope of obtaining in the small joints a useful fibrous ankylosis, in a moderate amount of time, or a bony ankylosis in the large joints in a very long time, a number of years.

Now what does surgical or radical treatment offer? Very little in the small joints. Conservatism is the best course. In the large joints it offers a rapid method of obtaining bony union, if properly used. The proper use of surgery requires first the consideration of the patient's age. Immediate surgical fixation or resection is demanded in adults. For instance, resection of the knee with resulting fixation, fixation operations of one of several types on the spine, resection of the elbow with or without ultimate fixation, produce an overwhelming percentage of satisfactory results. In children the tale is different only in relation to age. Surgical fixation of the spine in children under twelve, offers little over conservative treatment, as I proved by a series of comparative cases two years ago. Surgical fixation, by one of the methods of extra-articular bone grafting, is successful and demanded in children over five. This operation can be done very early because it does not interfere with bone growth, beyond the interference already produced by the disease. Surgical fixation of the knee joint can safely be done after the sixth year, if care is taken to remove only the minimum of bone and cartilage. In the elbow and shoulder sur-

gical fixation in children can well be delayed because conservative treatment does not interfere with locomotion.

If one has seen, as I have so many times, the prolonged invalidism often covering the whole childhood of the patient, inherent in the so-called conservative treatment of tuberculosis of the hip, knee or spine, one will turn with pleasure to the comparatively happy results of surgical fixation.

It must always be remembered that no surgical fixation should ever be resorted to unless the diagnosis is absolutely established. In spite of the many reports of the good results of conservative treatment I cannot resist the conviction that many of the cases were never tuberculosis at all, but were the results of other conditions, pyogenic infection, Legg-Perthes disease or what not. The only way to establish the final absolute diagnosis of tuberculosis in any joint is the surgical removal of material for laboratory examination. I have been deceived too many times in the diagnosis of either early or late tuberculosis, to dare to condemn a child to surgical fixation or to years of conservative treatment without a competent biopsy of the joint.

If there is time I should like to present a short movie of the results of extra-articular fixation of the hip.

DISCUSSION

Dr. John T. Hodgen, (Grand Rapids): The only thing I should like to ask Dr. Kidner to do when he closes the discussion is to describe the mechanics of the operation. That was not clear, and I should like to get it. I believe, in the first place, that the difference we have in this country and abroad is due to the fact that the organism in this country, as Dr. Kidner has suggested, is a different one or a more virulent one from that across the water.

I think most cases of joint disease in children when we get them early are confused with other types of arthritis, and I think it is most important to get your diagnosis very quickly and to start treatment on the child. Confusion very frequently results because arthritis of some other description simulates tuberculosis of the joint. I think "night cries" is pathognomonic in most cases of tuberculosis in children. I don't know whether I disagree or agree with Dr. Kidner, but I believe that not only any tuberculous joint should be put up in plaster of paris and immobilized completely, but that the child who has that joint should be immobilized at the same time.

I think it is most important at the present time that the medical profession educate the laity to tuberculosis of the joint, because I know of no condition which the laity know less about than tuberculosis of the joint, and I find that it is very hard to get the family to agree to radical procedures in tuberculous joints; they think that any operation upon a tuberculous joint is radical. It may not seem so to us, and we are in the habit of thinking that operation is a very simple thing, but the families of these patients do not think so.

I should like to ask Dr. Kidner to go into detail, which he did not do, as regards the exact technic, from a mechanical standpoint, of the operation which he uses. I think I use the same operation, but I should like very much to check up.

Dr. Carl Badgley, (Detroit): I certainly cannot find anything to criticize in Dr. Kidner's paper, although I am certain if he were in another community he would find a great many people who would be very anxious to stand upon their feet and decry the method which he has advised. It has certainly been our experience that the conservative treatment of tuberculosis of the joint leaves a joint which may have a certain degree of function and which may be a fairly satisfactory joint and may serve that individual for a number of years, but it is always a joint which is a dangerous joint, it is always a joint which may have an exacerbation, an acute exacerbation, of the infection, producing a much more serious disease in that individual than when the disease first came on. It has been our experience that the prognosis is much poorer in a joint that has had exacerbation than in a joint which is first attacked by the disease.

A number of years ago I reviewed the history of the treatment of joint tuberculosis, and I presume it is quite characteristic of the treatment of any disease. It is most interesting to see the cycles through which medical men in the generations before us have gone in the treatment of this condition. In 1880 it was the consensus of opinion that a tuberculous joint should be treated exactly as a cancer, that the only cure was radical excision of all tissue which was involved in the disease. For that reason, wide excisions of tuberculous joints were performed, and years later six to seven inches shortening of the leg was not an uncommon finding at all, leaving an absolutely useless leg for the individual.

This naturally made the pendulum swing more and more toward the side of conservative surgery, so that the dictum in England and the dictum in our eastern schools has tended more and more to be that of conservatism.

I do not believe there is any question that in Boston today they will still maintain that in children we should employ conservative treatment, that in the adults they now admit radical operative treatment should be employed. On the other hand, a few hours from Boston, if we visit Hibbs' clinic, we will find that there they stoutly deny the possibility, with proof which can be substantiated by research work which they have maintained of the children who came to their hospitals in New York City, demonstrating that conservative treatment does not cure these cases, but that exacerbation is very common.

I have no hesitancy whatsoever, after having collected a group of cases at the University Hospital, and finding them apparently well for periods of five to seven years, then having them return to us with an acute exacerbation and very seriously ill, in saying that the conservative form of treatment in children is not a sound method.

It is interesting, also, I think, in considering the treatment of a disease, to consider the viewpoint of the individuals responsible. As a matter of fact, I think it is absolutely essential that we know the viewpoint of the individual before we understand what he is getting at.

I can show just as many cases of movable joints apparently cured by conservative methods as Sir Henry Gauvain can show, but I can also show those same cases a number of years later with acute exacerbation of their infection. For

that reason I feel that Dr. Kidner is perfectly correct in his statement that radical surgery is the outstanding method of treatment of bone tuberculosis in children as well as in adults. I think it is generally recognized that surgical treatment in adults is the treatment par excellence.

The question, of course, is of diagnosis. In my mind there is no question as to treatment. If we can diagnose a tuberculosis, I am convinced what should be done with the patient. The diagnosis is a difficult matter. Diagnosis in some joints is more difficult than in others.

Phemister has given us a wonderful method of differentiating tuberculosis in the knee joint from other conditions. Phemister's rule properly applied will enable us to differentiate the general tuberculous infection of the knee joint; that is, that tuberculosis kills the tissue in the joint, kills the cartilage in the joint, by spreading over the periphery of the cartilage from the periphery of the joint. There is no destruction of the weight bearing area in tuberculosis of the joint in the vast majority of cases of tuberculosis of the joint, because the primary lesion is not bony in the vast majority of cases. There may be dissension from this. There may be a great many people who disagree, but the facts remain that in practically every joint which we open we will find that there is a marked synovial tissue infection with a growth of the synovial tissue over the cartilage surface, with a panus formation on top of it, with destruction of the cartilage beneath it. The area where the pressure of one bone against the other which by motion prevents the panus growing in between those two contiguous bones, acts as a preventive to destruction of that cartilage, and that is the reason we rarely see immobilization in a knee joint or in any tuberculous joint, because there are always retained cartilaginous surfaces which are in contact, whereas if it is a purulent infection of the joint, a purulent process by autolysis destroys the cartilage, and the destruction is not in the periphery alone, the destruction is throughout the entire joint. Bone is in contact with bone, and bony ankylosis can result. That is why we see in a gonorrheal arthritis a bony ankylosis as a result. In tubercular arthritis, rarely do we see bony ankylosis.

Destruction of the bone as shown by Phemister is in a late case. The early case, the case which Dr. Kidner is pleading for, is difficult to diagnose by any other means than by, as he said, operative investigation of the tissue.

Unfortunately, this is not as easy as it sounds. It is a very simple matter to go in and remove a portion of the capsule or to remove a portion of the diseased tissue, but it has been our ill fortune to remove portions of tissue which our pathologist has reported as not showing evidence of tuberculosis. We have observed the case for a period of months afterward, again opened the joint and again sent tissue to the pathologist and had a report of syphilis come back. Then on the third time, in one particular case, we thought we would fuse the joint anyway, and on fusing it we sent him sufficient tissue so that he was enabled to make a diagnosis of tuberculosis. In other words, it is necessary to obtain the diseased tissue before a diagnosis of tuberculosis can be made. You may open a joint in a part which is not yet involved with the tuberculous process, that has a pathological change because of the tuberculous process elsewhere, and not have your diagnosis confirmed. So it is essential, if a diagnosis of tuberculosis is to be made, that a portion of the diseased tissue itself be removed.

For these reasons, and also because of the ability of a competent pathologist to tell by frozen tissue technic in the vast majority of cases tuberculous tissue, we have made it a practice to combine the two operations into one, and to be prepared, in case the diseased tissue proved to be tuberculosis, to immediately go ahead with our operative procedure and fuse the joint. If the pathological examination is negative, we then do not fuse the joint.

Dr. Kidner speaks of immediate operation on these cases after recognition of the condition of the disease. I am not so certain in certain types of bone tuberculosis that it is wise to operate immediately upon these cases. I have been told by Dr. Cabot (I have no knowledge of my own concerning this) that when they could determine kidney tuberculosis very early they immediately were joyed to think that now they could cure this disease, but much to their astonishment they found that early operation upon the early infectious kidney killed the patient in a higher percentage than those cases which came to them late. I think also that I have seen something like that occur in my operations upon early tuberculosis in the joint. I think that there is a tendency, if one operates these cases during the very early phase, to flare up, possibly to produce a miliary tuberculosis, more than if a certain time interval had elapsed. In other words, I do believe that we should somewhat hesitate about immediately jumping into an acute sudden onset in tuberculosis because there are some facts that tend to point to the development of an immunity in the individual who has tuberculosis, that his body tends to develop a protective immunity to the spread of the disease elsewhere.

This is illustrated also by the fact that a person with pulmonary tuberculosis who develops a joint tuberculosis after the pulmonary tuberculosis generally has a clearing up of the pulmonary lesion.

I quite agree that the only cure of a tuberculous joint is bony ankylosis. Osgood will say and has said that he is not one of those who is willing yet to give up the ideal which is, of course, the ideal of any treatment, of complete restoration of function of the tuberculous diseased joint. I also would hesitate to make a stiff joint where one might make a completely free movable joint. But I do not believe that we should be treating these patients conservatively with the hope that we will sometime obtain one such joint and have hundreds of patients be chronic cripples for the rest of their lives. I think the operative method, the fusion method that Dr. Kidner has recommended, is the method of choice.

I cannot leave without expressing my great satisfaction that Dr. Kidner was able to demonstrate to you such wonderful results in this operation. I think the lack of deformity was apparent in practically all of them with the one exception of the case with the adduction deformity. The manner in which these patients get around is surprising; they have practically no disability, especially if the treatment occurs while they are children and they can learn to adapt themselves to this gait. I think Dr. Kidner is to be greatly complimented upon the end results of his cases.

Dr. Fred C. Kidner (Closing Discussion): Dr. Hodgen very kindly asked about the technic of the hip operation. The original Hibbs' operation as described by him consisted of an oblique cutting across of the greater trochanter for a distance of about two to two and a half inches, the oblique cut being made in the sagittal plane of the body.

The piece of trochanter thus removed was turned about with its muscles still attached and then placed in contact with the scarified place on top of the neck of the femur and wedged into a groove above the upper edge of the acetabulum. Theoretically, this operation is very beautiful; practically, it can be done about once in five times, in my experience. The joints are so frequently badly destroyed that modifications of this method have to be applied in most cases. Those modifications may consist of taking the trochanter transversely, freeing it entirely, making a wedge out of it, sticking it across the joint cavity. A graft may be taken from the tibia and placed across from the base of the trochanter to the ilium, two grafts as Albee does may be used as struts, and various other methods and modifications have been used, all of which are successful in some cases. We must not, however, tie ourselves down to any one technic.

I quite agree with Dr. Badgley that the secondary joints are far worse than the early ones. A case that has been well apparently for a year or two years or five years comes back with a new attack of his old tuberculosis, much sicker than he was originally.

As to the treatment with the radical procedures, it was my pleasure this year, or my delight, rather, to go abroad with about thirty members of the American Orthopedic Association, and almost without exception I found them in the last two or three years to have swung very rapidly toward the surgical fixation of the joints in tuberculosis. There were one or two notable examples of whom Dr. Robert Osgood of Boston is still perhaps the most brilliant example, who still maintained that we had no business to take function away from a joint, no matter what the results to the patient were of leaving them alone. Nevertheless, the trend of orthopedic opinion in this country, at least, is leaning toward the surgical fixation of all the larger joints in tuberculosis.

Dr. Phemister's method of diagnosing knee joints is of course, as Dr. Badgley says, a great addition to our armamentarium of diagnosis, but it doesn't tell us anything until late in the disease. I am not yet willing to accept it as absolutely final.

Dr. Badgley is also quite correct in stating that sometimes we go in to take a specimen out of a joint to prove tuberculosis and the laboratory report comes back inflammatory tissue without tuberculosis. I think that is usually a fault in our technic, we do not explore the joints widely enough and do not search completely enough for undoubted diseased tissue.

Dr. Badgley spoke of my having said that I believed in immediate operation. I think the impression gotten from my paper might very easily lead to that statement, but I do not believe in immediate operation. I believe in watching children, in conservative treatment, in carrying them through the acute, inflammatory stages, and waiting until a diagnosis is absolutely established and until we see that destruction has begun and that the disease, if possible, is more or less quiescent. It has never been my unfortunate experience to cause a miliary tuberculosis by operating on a tuberculous joint. I am constantly afraid of that happening because I am well aware of the reported dangers. I do not operate on these children in what is called the acute stage, although I do operate on joints which are still acute after long periods of fixation and conservative treatment.

CHOLANGITIS*

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and

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The peculiar appearance of the surface of the liver frequently observed during operations on the gallbladder and common duct is familiar to the majority of surgeons. There is no uniformity of opinion, however, as to the reason for this appearance and for the condition of the underlying hepatic tissue. The association of chronic cholecystitis with superficial scarring of the liver adjacent to the gallbladder usually leads to the loose diagnosis of chronic hepatitis. If exactly the same appearance is presented in conjunction with an obstructive lesion of the common duct, and jaundice, the diagnosis is likely to be chronic cholangitis or obstructive biliary cirrhosis. That such confusion exists is not surprising. It is just as difficult for the surgeon to be certain of what is occurring within the liver from superficial inspection of its capsule as it is for him to estimate the degree of chronic pancreatitis by palpating the head and body of the organ to determine the degree of hardness or softness, or for the pathologist to foretell with certainty the type of nephritis in a given kidney before it is submitted to microscopic examination. The comparative rarity with which hepatic lesions of the type under consideration can be examined pathologically is another reason for the lack of understanding of their true nature. From the wealth of this material in The Mayo Clinic, we have been able to make extensive studies of the question in its surgical aspect. We now feel that with this experience, and with a knowledge of the clinical history, it is possible, with a fair degree of accuracy, to determine the extent and nature of the hepatic lesion in the majority of cases of surgical biliary disease.

Chronic cholangitis forms the basis of most microscopically recognizable lesions of the liver associated with infection in the gallbladder, with and without obstructive lesions of the common duct, but the condition appears in a large number of different forms and under a variety of circumstances. Its early stages are micro-

scopic and the changes are found with difficulty; its later stages may scarcely be distinguished from portal cirrhosis of the hobnail type. We are not concerned here with the acute suppurative form of cholangitis or with those uncommon types secondary to infestation with parasites, such as *Ascaris lumbricoides* or *Distomum hepaticum*, or with those considered hemogenous in origin as in catarrhal jaundice, but rather with the condition as seen when the clinical diagnosis of a surgical lesion of the biliary tract has led to exploration. We have defined it as an inflammatory process occurring in and around the wall of the intrahepatic and extrahepatic bile ducts, varying from simple catarrh of the lining epithelium to marked lymphocytic and leukocytic cellular infiltration of the connective tissue of the entire portal spaces, and associated with proliferation of fibrous tissue leading to tremendous thickening of the walls of the duct. This must be modified by the statement that although in most cases the change is confined to the bile ducts proper it may extend to the intercellular bile canaliculi and there may produce the condition known as biliary cirrhosis.

NORMAL ANATOMY

The extracellular system of ducts of the liver consists of an intricate arborization of slender channels lying entirely within the portal spaces, and extending from the Hering canals—the points of juncture of the intercellular canaliculi with the bile ducts proper—to the entrance of the common duct into the duodenum. Throughout its whole intrahepatic course, this biliary tree is in intimate relation with the portal vein, the hepatic artery, the nerves, the lymphatic spaces, and the entire supporting structure of the hepatic parenchyma with the exception of the small amount of connective tissue lying around

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the hepatic vein. An appreciation of the close proximity of these structures to each other, and the extraordinarily widespread distribution of the system of ducts throughout the vulnerable hepatic cell-mass can be correctly gained only by study of corrosion specimens such as those made by Counseller and McIndoe. The diffuse nature of an infection spreading along such channels is at once clear, and the serious danger of parenchymal involvement is obvious. Further examination of these casts reveals another series of structures which we consider play an important part in the chronicity of the disease. These are the parietal sacculi (Kiernan), diverticula (Beale), or mucous follicles, which exist as two longitudinal rows of tiny crypts, which end blindly, on opposite sides of all the major intrahepatic ducts. We have repeatedly called attention to their vestigial nature, although other investigators have ascribed various functions to them²⁶. That they can harbor chronic infection long after surgical drainage has been established in the common duct is, however, undoubted¹⁵.

Extending backward within the hepatic parenchyma from the major system of ducts, and united to it by means of the Hering canals, lies the vast network of intercellular canaliculi. The ramifications of these tiny excretory channels are so numerous, and their relationship to the hepatic cells is so intimate that not only is there a canaliculus to every cellular surface that is not in direct contact with a blood capillary, but each canaliculus is formed from a modification of the cell wall itself and is thus an integral part of it.²² It is needless to comment on the way in which a toxic substance can then be conveyed directly to the hepatic cells.

Since it has not been settled definitely whether the extension of infection in the type of chronic cholangitis we are discussing is by the blood stream, by means of the ducts themselves or by the lymphatics surrounding them, it would be well to add a word on the distribution of the lymphatic supply of the organ. The lymph vessels are exceedingly numerous and may be well observed when distended by ligation of the connective tissue in the gastrohepatic ligament. The capsule in particular is richly supplied with a dense network which communicates with the deeper system lying in the connective tissue framework of the parenchyma. These vessels, clearly seen in microscopic sections, occur throughout the whole extent of both the portal spaces and

the adventitia of the hepatic veins. The former drain into the lymph nodes at the hilum; the latter communicate with the mediastinal lymphatics. One of the most important and interesting questions concerned with the anatomy of the liver, as yet unsettled, deals with the presence or absence of lymphatics within the liver lobules. Merkel and Disse considered that spaces exist between the capillaries and the hepatic cells which surround the intercellular capillaries like a sheath. This has been denied by Browicz and Herring and Simpson. Eppinger thought that the lymph spaces lie between the Kuppfer cells and the hepatic cells. For many investigators no lymph spaces whatever exist between the cells. From a careful study of this question by the silver-carbonate-pyridin method we are inclined to think that although definite endothelial lymph spaces are certainly absent within the hepatic cell-mass, the fine reticular network or "feltwork" surrounding each intercellular capillary is permeable to lymph. Probably the lymph spaces, both in the portal spaces and around the hepatic veins, collect the lymph which permeates the enormous spongework of reticular fibers in direct contact with the hepatic cells. In support of this theory is the fact that edema fluid collects here, amyloid is deposited in the meshwork, and leukemic infiltration penetrates it. Shaffer has found, further, that injection fluids communicate with the area from the interlobular lymphatic vessels.

THE IMPORTANCE OF INFECTION IN THE ETIOLOGY OF CHOLANGITIS

With due regard to the possibility of an occasional hematogenous origin the usual conception of chronic cholangitis is that it is the result of obstruction of the common duct, with an ascending lymphatic infection of the walls of the duct and portal spaces, or of a low-grade, ascending infection of the stagnant bile. This is certainly the problem as it presents itself to the surgeon at the time of operation, but one should realize that in those cases in which permanent cure is to be expected, it has its genesis long before the establishment of obstruction, retention of bile, and jaundice. This means that the element of infection is more important than the presence of obstruction, and that although obstruction and retention of bile undoubtedly hasten and intensify the process, once the infection is established they do not, except after long periods of time, produce cholangitis by themselves (Ford, and Har-

ley and Barratt and others). That this is so can be proved by careful pathologic examination of sections cut from various parts of the liver obtained at necropsy in the following distinct groups of lesions: (1) Lesions of the common duct without infection, but with obstruction, as seen in carcinoma of the head of the pancreas and in carcinoma of the ampulla of Vater; (2) lesions of the biliary system with infection, but without obstruction, as seen in cholecystitis, and (3) lesions of the common duct, with infection and obstruction, as seen in stones of the common duct and in benign stricture of the common duct.

THE EFFECTS OF OBSTRUCTION ON THE LIVER IN
THE ABSENCE OF INFECTION

Perhaps the best example of a condition in the liver of the human being, that is comparable with the effect of ligation of the common duct in a healthy animal, is carcinoma of the head of the pancreas or of the ampulla of Vater. Here is rapidly progressive and ultimately complete obstruction occurring in otherwise clean and uninfected ducts. The effect of this on the liver is entirely similar to the condition of hydronephrosis, although the greater ratio of parenchyma to duct, and the relatively smaller area of extraparenchymal bile passage, mask the extent of the condition in the liver. It is only by specimens prepared by corrosion that the change can be fully appreciated. The ducts, in common with the gallbladder, become enormously dilated; their ends become clubbed and varicose so that a cystic condition may appear beneath the capsule. The walls are thinned, and in microscopic sections of the portal spaces at various distances from the hilum to the periphery one is struck by the huge size of the ducts in contradistinction to the smaller portal vein and insignificant hepatic artery. In fact, one gains the impression that the enlargement of the portal canal and the pressure exerted on its vascular components by the progressive expansion of the bile ducts must affect to a marked degree the entire circulatory mechanism of the liver. Coincident with the changes in the major bile ducts, there is progressive degeneration in the parenchyma, dependent on the effects of obstruction on the tiniest excretory channels, the intercellular canaliculi. These are dilated, clubbed, and in some cases entirely ruptured. Inspissated bile forms the structures commonly called "bile thrombi" and these are observed scattered throughout the canalicular system. Although they are most often aggregated

around the central veins, they occasionally occur in the neighborhood of the portal spaces. The hepatic cells are distorted by the pressure of the expanding canaliculi; some are atrophic and vacuolated; others are pigmented with droplets, granules and needle-like crystals of bile pigment. Even in cases in which obstruction is most marked, however, careful study fails to show intercellular canaliculi such as have been described by Browicz. This appearance is apparently a phenomenon of eruption. In more advanced cases, the hepatic cells show extensive atrophy, and suffer greatly from the combined action of obstruction and stasis of bile.

Grossly, the liver is enlarged, smooth, round-edged and greenish-yellow. But it does not at first show the granular surface typical of the presence of fibrosis. It is important not to mistake the prominent lobular markings due to retention of bile in this condition with the finely granular, roughened surface characteristic of biliary cirrhosis.

From the beginning of the obstructive phase until late in the disease, however, there is no definite evidence of infection within the liver. Bile is normally sterile but is not bactericidal. Indeed it favors the growth of organisms of the coli group. Infection of the retained secretion therefore usually results in acute purulent cholangitis, this being a terminal event. Few lymphocytes or leukocytes are seen in the portal spaces or scattered among the hepatic cords. The bile ducts are free of cellular infiltration, and the content of the duct system is dark green bile, later, light brownish-yellow, and later still, clear mucus or "white bile," the significance of which has been discussed previously.¹⁶ Many investigators have described a fibrotic process resulting from the toxic action of the retained bile (Harley and Barratt, Ford, and Weber), but the consensus of opinion is that these changes do not occur until late in the disease; in animals in six to twelve months; in man, probably longer. It is clear, then, that in clinical practice such cases would rarely be met. The duration of jaundice in malignant conditions is comparatively short, and the patient dies before the stage of fibrosis is reached. In the presence of a tumor of the head of the pancreas associated with a dilated gallbladder and a mottled, enlarged, but smooth liver, one can state with a fair degree of certainty that the whole intrahepatic biliary system corresponds with the dilated condition

of the gallbladder, and that little, if any, fibrosis has occurred. After six or eight weeks of continuous and progressive jaundice, the system of ducts will reach the most astounding proportions and the condition is not one of chronic cholangitis, chronic hepatitis, or biliary cirrhosis, but one of uncomplicated hydrohepatosis.

THE EFFECTS ON THE LIVER OF INFECTION
WITHOUT OBSTRUCTION

It has long been suspected that among its other known functions, possibly by reason of its relation to the reticulo-endothelial system, the liver possesses a detoxifying property intended to protect the body against bacterial invasion, against the toxic products of bacteria, against metabolic poisons, and against a great variety of foreign substances inimical to the organism. The evidence for this is exceedingly contradictory and difficult to assess. Nevertheless, it is the opinion of all who have investigated the question, that in the great majority of chronic infective abdominal conditions, certain inflammatory changes follow in the liver which have been called by the somewhat vague term "chronic hepatitis." First noted in association with cholecystitis by Naunyn, it has been corroborated by Langenbach, Fink, Mayo Robson, Grube and Graff, Kehr, Graham, MacCarty and Jackson, and Mentzer. The extensive studies of Heyd, Killian, and MacNeal have shown that diseases in both the appendix and gallbladder can produce these hepatic changes while other workers have incriminated lesions occurring anywhere in the area of drainage of the portal veins. The hepatic lesions in these cases appear to us to represent, not a single embolic infection of the organ, but rather a series of minute insults occurring over a long period of time as they are found in various stages of development throughout the substance of the liver. Possibly they represent a tissue reaction resulting from the detoxification process, the visible manifestation of which we loosely called hepatitis. So frequently is this condition found at necropsy that many pathologists prefer to ascribe it to a senile, atrophic or involutional change rather than to actual inflammation.

Since we are dealing here with the genesis of definite chronic cholangitis, however, we will confine ourselves to the condition which in the liver is associated with the most definite, obvious and important changes, namely, chronic cholecystitis. The presence or absence of stones is not

taken into account, for the "aseptic" or cholesterol stone is not necessarily associated with infection of the wall of the gallbladder. Every surgeon is familiar with the changed appearance of the liver in the vicinity of the infected gallbladder; the capsular scarring and radiate markings; the change in the normal hatchet-like edge of the right lobe to a rounded and edematous border or to a border of fibrous tissue ending in a sharp edge; the parenchyma itself swollen and friable, or tough and firm. This inflammatory reaction may be summarized by stating that it consists of periductal lymphocytic infiltration and fibrosis with thickening of the portal spaces and occasional proliferation of terminal bile ducts. Sometimes both processes extend between the columns of hepatic cells, which may appear vacuolated or distorted. Evidence of biliary obstruction is found in the presence of scattered deposits of bile pigment within the cells and a few bile thrombi in the canaliculi. This reaction varies in amount and apparently does not bear a direct relationship to the degree of reaction in the gallbladder at the time of operation, for, as we have already pointed out, it represents the sum total of a succession of infections and reinfections over a long period. Mentzer and others have shown, furthermore, that this change, although most marked near the gallbladder, occurs diffusely throughout the whole organ. The mechanism of spread is simple, but its direction is not so clear. The hepatic lesion is usually, but not always, secondary to the infection in the gallbladder, for Graham has shown that cholecystitis may follow pre-existent hepatitis. We have seen a number of cases in which well developed hepatic changes such as we are describing occurred in the absence of cholecystitis. Although the arterial supply of blood to the gallbladder is distinct from that of the liver, the lymphatic connection is exceedingly free, and the venous drainage of the organ is into the portal veins. An important point to remember is that the gallbladder is morphologically a median organ and lies in the cleft between the true right and left lobes of the liver. For this reason the lymphatic and venous connections of the vesicle communicate freely with the portal veins and lymphatics of both lobes. This explains the widespread nature of the hepatic changes. All available evidence, however, leads one to the conclusion that the lymphatics are the most frequent path by which infection

spreads. The rich capsular anastomoses, and the deeper channels within the portal spaces and along the bile ducts, carry the infection far and wide. The essential nature of the lesion is chronic capillary lymphangitis in the capsule and in the immediate vicinity of the intrahepatic bile ducts. The hepatic cellular changes are secondary to this. We have dwelt somewhat on this point because ascending chronic lymphangitis, in and around the walls of the ducts, is essentially the basic lesion in the more obvious condition of chronic cholangitis which occurs principally in the two most important surgical lesions of the common duct, namely, stones and benign strictures. It is also of great interest to note that although the hepatic changes we have enumerated are usually mild in the absence of obstruction, they may steadily progress over a number of years until well marked chronic cholangitis, or even biliary cirrhosis, may develop. In rare cases it is possible for progressive fibrosis and stenosis of the ducts to be carried to such a point that complete obliteration of the lumen occurs. We have described such an example of chronic obliterative cholangitis. This progressive sclerosis naturally receives a great impetus with the advent of obstruction.

THE EFFECTS ON THE LIVER OF OBSTRUCTION OF
THE DUCTS WITH INFECTION

The lesions which produce obstruction of the common duct, and which at the same time are associated with infection, form the most important group of surgical conditions in the biliary tract and are the most difficult with which we have to deal. Stones in the common duct, now believed to be practically always secondary to stone in the gallbladder, are associated with infection of the ducts from the moment the stones enter the choledochus, by reason of the pre-existent hepatic involvement preceding or following the associated cholecystitis. Benign strictures of the common duct are associated with cholangitis from the onset because they are usually traumatic and follow injuries during operation on infected gallbladders. In both conditions, obstruction and retention of bile occur in infected ducts. It is little wonder that the ultimate picture in the two is considerably different. In the former, the intermittence and degree of the obstruction, the length of time the stones are resident in the ducts, the association of hepatic fever and the number and duration of the obstructive periods combine to produce an hepatic lesion of varying grades of sever-

ity. These factors must be taken into account when estimating the injury to the liver. In the latter, the period of continuous jaundice and the severity of the hepatic fever must be carefully appraised. Few patients survive continuous jaundice of more than two years' duration. The pathologic picture in both conditions varies considerably from that in uncomplicated hydrohepatosis.

Specimens of the ducts in choledocholithiasis, when prepared by corrosion, show that it is the exception for extreme dilatation to occur, although a very large common duct occasionally is encountered. The "ball valve" action of the stones accounts for intermittent periods of relief, during which a certain amount of recovery occurs. Moreover, the proliferation of fibrous tissue which occurs throughout the biliary tree, limits the amount of dilatation appreciably. The gross appearance of the liver varies within wide limits and depends largely on the duration of the obstruction and the amount of chronic cholangitis (in the ducts) and the extent of the biliary cirrhosis (in the parenchyma). With only a few major attacks of jaundice, the liver may present, in addition to the evidences of pre-existent infection from cholecystitis, an almost smooth surface, faintly marked by the outline of the hepatic lobules, greenish-yellow if jaundice is present, but otherwise light brownish-red from the milky opacity of the scarred capsule. In more advanced disease, the surface becomes finely granular and mottled, and the organ appears slightly smaller than normal. Its edges become rounded and peculiarly distorted, particularly from enlargement of the right lobe. Finally, marked shrinkage occurs and the nodules of parenchyma, deeply stained by bile, are clearly seen to be surrounded by bands of fibrous tissue. Sections of the portal spaces, at different levels from the hilum to the periphery of the liver, showing different grades of the process, as well as specimens from the cell-mass itself, indicate the evolution of the process. The most striking change is the enormous proliferation of fibrous tissue in and around the bile ducts, finally involving the whole portal canal and including in its grasp the entire vascular tree. The duct itself is moderately dilated; its mucosa is atrophic or hypertrophic, with vacuolar changes in the epithelial cells. The submucosa, and indeed the whole portal space, is infiltrated with lymphocytic and polynuclear leukocytes, the former predominating. These oc-

cur in aggregations, sometimes in lymphatic spaces, sometimes around the parietal sacculi on opposite sides of the lumen. In this situation they tend to be latent, and represent possibly persistence of the infection. In chronic cholangitis this change diffusely spreads throughout the biliary tree, from the finest to the largest radicle. It is the result of obstruction and retention of bile occurring in already infected ducts and its mode of production is usually ascending lymphangitis of the wall of the duct or perhaps direct ascending infection of the static bile. The interesting point, however, is that were it not for the fact that infection occurs before the onset of obstruction, many patients with stones in the common duct, or with stricture, undoubtedly would escape with little, if any, chronic cholangitis and biliary cirrhosis.

The same pathologic features are to be seen in benign stricture of the common duct except that the process is more rapid, and the cholangitis is more severe. Of course, if a biliary fistula is present, the changes may be entirely absent. If the jaundice is progressive and profound, however, the onward march from mild to severe chronic cholangitis is interrupted, and finally biliary cirrhosis of marked degree makes its appearance unless the obstruction is relieved.

We have left the consideration of biliary cirrhosis to the last because it is the most advanced stage of all and is usually superimposed on chronic cholangitis with longstanding obstruction. At the time that the surface of the liver begins to grow definitely granular, with a roughness appreciable to the touch, one may deduce that biliary cirrhosis has occurred. At first enlarged, the organ begins to shrink during this period until it finally assumes the contracted, green, finely granular appearance, with little, if any, evidence of regeneration, that is aptly called, "the liver of surgical delay." The microscopic evidence of this stage is to be seen in the parenchyma, and consists of progressive fibrosis, frequently monolobular, but just as often intracellular, with diffuse lymphocytic infiltrations, parenchymal atrophy, and marked proliferation of terminal bile ducts. Regenerative cell forms such as are constantly found in portal cirrhosis, are here absent. Gay has shown that the regenerative power of the liver is markedly diminished in the presence of obstructive jaundice, and for this reason return of function cannot be hoped for until the obstruction is relieved.

Thus it can be seen that in the important surgical condition of the liver illustrated by stones and benign strictures of the common duct, the obstruction, and stasis of bile, occur in an organ already carrying a low-grade infective process. The lighting up and rapid development of chronic cholangitis is the uniform result, and unless the obstruction is released, the ultimate stage of biliary cirrhosis will be produced, the hepatic reserve permanently reduced, and the organ crippled. It is probable that the tremendous injury occurring in the liver from this cause is responsible for many of the persistent symptoms which handicap the patient long after operation.

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FUSED KIDNEY WITH HYDRONEPHROSIS AND HYDRO-URETER

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That anomalous development of the kidney whether as to form or position has predisposed to pathological changes with or without characteristic symptoms has been known for some time. Fused kidney has been recognized, due to its unusual and outstanding formation since the days of Vesalius who described the condition first, in the middle of the sixteenth century. Three hundred years later, Rokitansky published the results of his monumental work at the Allgemeine-Krankenhaus previous to 1845, in which he evinced a rather clear conception as to the defect and excess of formation, anomalies of form and position, and described the round, elongated, prismatic, triangular, cylindrical kidney, also the lobulated and cross furrowed type, as well as the horseshoe type (*ren unguiformis*) and referred to the latter as the "lowest form of fusion." Fused kidney may be said to be found once in approximately 1,000 autopsies. Different investigators present figures anywhere from 1:600 to 1:1,000.

Fused kidney is more especially prone to hydronephrosis from compression of the ureter due to its form and position with relation to other normal anatomical structures, as well as to infection and stone formation.

DEVELOPMENTAL ANATOMY

The anlage which patterns this anomaly is the epithelial bud which appears at the caudal end of the Wolffian duct at its cloacal entrance and posterior to the allantois, during the fourth week. This is capped in a few days by a collection of cells derived from the intermediate cell mass, known as the nephrogenic blastema, and which develops into the definitive kidney secreting substance. The collecting system being evolved from the proliferation of the epithelial bud as a diverticulum of the caudal termination of the Wolffian duct and splitting to ramify into the increasing nephrogenic blastema assumes the role of the final urinary duct system and therefore consists of the ureter, pelvis, calyces and collecting tubules. At this early point of the development any deficiency in the slight amount of mesodermal separation of the two lateral masses of nephrogenic blastema could easily account for any style or degree of kidney fusion from a slight ribbon tissue, with or without any remnant of cortical substance up to the completely fused single kidney mass. Should fusion occur before somatic growth has progressed enough to

separate and cause "ascent" of the kidneys, such fusion can and does take place. Moreover, at this stage of formation, the ureter, pelvis and calyces lie frankly anterior to the kidney mass, the general direction of the collecting tubule rays converging from the rapidly growing posterior kidney mass. With the completion of the eighth week, actual rotation in the long axis has occurred to the extent of the midline, and with the rapid growth of the coelum and resultant divergence of the lobulated kidney masses, so that by the tenth week, the final posterior relation of the pelvis, the medial relation of the ureter, and finally the normal major calyces arrangement has taken place. With such rotation being impossible due to fusion, the anterior relation of the ureters and pelves together with the unusual direction of the calyces is well shown in the accompanying urographic reproductions and illustrates important points in the interpretation of non rotation.

Not until the advent of pyelography as and adjunct to cystoscopic diagnosis have we been able to recognize this condition except on accidental discovery during an operation or at the autopsy table. The accompanying case report demonstrates points which are valuable in the early recognition.

CASE REPORT

White female, married, no children. Usual diseases of childhood, otherwise well up to two years ago when she became conscious of a slowly increasing dull aching pain in the lower right and left quadrants of the abdomen, the pain decreasing or disappearing on assuming the prone position. A few months later appendectomy was performed without producing the desired results. At operation the surgeon felt a mass which he believed to be kidney across the vertebral column. First noticed symptoms referable to the urinary tract in August, 1927, following a severe cold, when she noticed dull aching pain in the right and left costovertebral angles, with terminal pain on urination. There was no frequency nor hematuria. The catheterized urine contained a small amount of albumen, was acid; no sugar; pus, two plus. Smears contained a large amount of Staph.

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No T.B. bacilli found. Similar findings were made October 4, 1927. Cystoscopic and urographic studies made the following day. There was a moderate generalized cystitis. The ureteral orifices were located normally and were functioning. Number 5F. catheters were passed to the right and left sides without obstruction. Urine from the right and left catheters dripped rapidly, a clear pale urine which was free from pus; the bladder urine at the time contained an occasional pus cell. 20 cc. of sodium iodide was injected to the right and a similar amount to the left.

The reproduction of the left pyelogram is shown first. Here it is to be observed that the left pelvis and group of calyces are definitely dilated. A point in the diagnosis of fused kidney on this side is the fact that the lower calyces frequently point in the opposite direction from normal, i. g. toward the midline. The pyelographic studies of the right side were not diagnostic and a right uretero-pyelogram was made later, with an acorn (12F.) tip catheter just within the ureteral orifice. This is shown in the second illustration, and

demonstrates a bizarre pelvis with three odd shaped calyces, one vertical, two horizontal, and extending well across the midline of the body. The left side indicates a fair amount of rotation, but the right side illustrates non rotation. It is probable too, that a major amount of kidney tissue was drawn to the left side of the body although the Phthalein return did not bear out this fact.

The usual dietary medicinal treatment in this case was supplemented with periodical ureteral dilatation and pelvic lavage with the result that she has been symptom free for the past year. There has been no pus in the urine from the bladder or from either ureter for more than a year. This patient was told that there is no way of telling just when another attack of cystitis, colic or other manifestations of urinary dysfunction will occur. She has a fair idea of the handicap, and by taking advantage of periodical physical examinations has a good chance of preventing any rapid renal cortex destruction as well as recurrence of infection of the collection mechanism.



Figure 1
Complete Filling of the Left Ureter and Pelvis



Figure 2
Complete Filling of the Right Kidney Pelvis. Two large Calyces Extending across Vertebral Bodies

CITY GAS CHIEF SOURCE OF CARBON MONOXIDE DEATHS

City illuminating or manufacturing gas is the chief source of deaths from carbon monoxide poisoning, according to the committee on poisonous gases of the American Medical Association. "The increasing use of city gas for heating homes may involve a large increase of fatalities both of individuals and of entire families unless an efficient inspection supervision and control of household gas appliances is established," the committee stated in its report. "City gas of high calorific value contains much less carbon monoxide than gas of low calorific value. It is in the interest of public health and safety that the amount of carbon monoxide in city gas should be reduced. To this end the price of gas should be based on the heat unit instead of the cubic foot. Scientific investigation for the development of less poison-

ous gas deserves liberal financial support."

The committee recommended that victims of carbon monoxide poisoning be treated with immediate artificial respiration by the prone pressure method. Pulmotors, lung motors and similar mechanical devices should be discarded in favor of the prone pressure method. Inhalators, on the other hand, were recommended to be used to supply the victim with a mixture of oxygen and 5 or 7 per cent carbon dioxide, or with oxygen alone if the carbon dioxide is not available. Such a patient should be kept warm and prevented from making any physical exertion, even so little as sitting up, until he is fully restored to normal condition. Heart strain may result from allowing a partially resuscitated person to walk about or otherwise exert himself—Science Service.

POST-OPERATIVE PULMONARY ATALECTASIS*

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The fact that pulmonary atelectasis is a frequent post-operative complication and that it bears an etiological relationship to other pulmonary lesions occurring after operations makes its prevention, prompt recognition and proper treatment, factors of importance in reducing operative mortality. Scott¹ has estimated that three per cent of operated patients develop pulmonary complications and that 1 in 200 die from a pulmonary lesion.

Atelectasis has long been recognized as occurring in newborn babes, in debilitated children and the aged suffering with bronchitis, in cases of diaphragmatic paralysis complicating diphtheria, and in cases of obstruction of the bronchus by a foreign body. Pasteur³ first described its occurrence as a post-operative complication.

It may happen after any form of anesthesia, any operation, and after wounds of the chest, abdomen, pelvis and extremities. However, it is probably more frequent after abdominal operations. In recent years much has been written about the subject and many cases of it have been reported. In this paper I am reporting eleven cases that have occurred in the University Hospital since July 1, 1928. Of these, two occurred after abdominal sympathectomy, one after phrenicectomy, one after lipiodol injection into the tracheo-bronchial tree, and one after rupture of a paravertebral abscess into a bronchus. A careful search of the literature has not revealed reports of any similar cases. The remaining cases of this series appeared following laparotomy.

Post-operative atelectasis or collapse of the lung occurs in its most striking form as a massive collapse, which may be defined as a total deflation of a large area of lung tissue occurring a few days after operation. It is of sudden onset, is accompanied by alarming symptoms, and its unique features are the physical signs of a consolidated lung plus a displacement of the heart to the affected side. It may involve any lobe or the whole of one lung. It involves most frequently the right lower lobe.

The symptoms are a sudden rise in temperature (101°-104° F.), a rapid pulse, dyspnoea, cyanosis, profuse sweating, pain in the lower chest, cough, productive of a thick tenacious sputum, and which the patient voluntarily inhibits. The signs are characteristic. The patient lies on the affected side. He sweats profusely, and is

dyspnoeic and cyanotic. The affected side is immobile and retracted and the inter-spaces are narrowed. Tactile fremitus is usually diminished but may be increased. There is dullness over the affected area and a high immobile diaphragm. Breath sounds are usually diminished or absent, though they may be bronchial in character, and they are apt to vary from time to time. Fine and coarse rales may or may not be present. Voice sounds are usually diminished or absent, though they may be increased or changed in character. The pathognomonic sign is displacement of the heart to the affected side. This displacement may be extreme. The opposite lung gives signs of compensatory emphysema.

Roentgen ray findings are diagnostic. The involved area is more dense than the surrounding lung; the heart and mediastinum are displaced to the affected side; the diaphragm is high and there is absence of its respiratory excursion; the costophrenic sinus is clear. Figure 1 shows the roentgenogram of Case 1 and illustrates a collapse of the right lower lobe thirty-six hours after an appendectomy.

Such a massive collapse is easily recognized but may be confused with lobar pneumonia, pulmonary embolism, or acute pneumothorax. The displacement of the heart to the affected side absolutely distinguishes it from each of these three conditions.

However, atelectasis may be partial or lobular in distribution. Indeed this is its most frequent and most confusing form. The onset is insidious, the symptoms moderate, and the signs are practically the same as those of a mild bronchopneumonia. Such a case may clear up or may progress into a massive collapse or be complicated by infection. If one can demonstrate displacement of the heart, he can easily differentiate it from pneumonia. Another diagnostic point is the variability of physical signs in atelectasis; they may

* From the Department of Surgery, University Hospital, Ann Arbor, Mich. Read before the Michigan State Medical Society, September 18, 1929.

be present at one time, an hour later they may be gone and within another hour return again.

That lobular atelectasis is often hard to

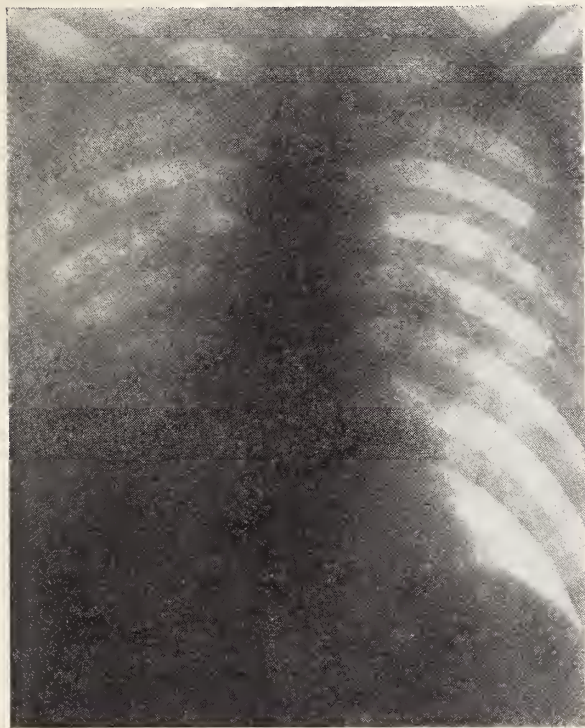


Figure 1

Case I. Portable roentgenogram. Note density of right lower lung field, obscuration of right leaf of diaphragm and shift of the heart to the right.

distinguish from pneumonia is well illustrated in Case II (figure 2). A man, who had a partial gastrectomy done under nitrous oxide-oxygen anesthesia on January 3, 1929, complained of pain in the right lower chest and cough on the next day. He was somewhat cyanotic but examination of his chest was negative. Temperature, pulse and respirations were 101.2, 110, 25, respectively. Carbon dioxide inhalations were given. On the next day he raised thick, greenish, tenacious sputum; there was slight impairment at the right base posteriorly, but no rales nor change in breath sounds were heard. Four days after operation there was dullness at the right base posteriorly and a small area where tubular breath sounds and a few crepitant rales were heard. Temperature, pulse and respirations were 101.2, 120, 20. Roentgenogram (figure 2) as taken on this day was interpreted as showing either atelectasis or pneumonia; but as there was some displacement of the heart to the right, and as the temperature and pulse rate were normal on the next day, a clinical diagnosis of atelectasis was made. The physical signs did not entirely clear

up nor did the patient stop raising sputum until twelve days after operation. The lung fields were clear by roentgenological examination on that day. The probable explanation of this man's clinical picture is that he developed a lobular atelectasis, in which area a low grade infection took place, and a mild broncho-pneumonia resulted.

There are several theories as to the cause of collapse of the lung and none of them quite explains all the clinical observations that have been made. Pasteur, whose first experience was with atelectasis occurring in diaphragmatic paralysis of the diaphragm², in writing about post-operative atelectasis^{3 4 5}, stated that the condition was always the result of a reflex disturbance of the mechanism of respiration, resulting in the distending forces of the lungs being so diminished that the contractile forces become stronger and an active collapse of the lung takes place. Against his theory is the fact that no one has ever reported collapse occurring after phrenicectomy either in humans or animals, except Case III of this series. A girl who had an osteomyelitis of the femur and a chronic cavernous suppurative pneumonitis at the base of the left lung developed several hemoptyses. A temporary left phrenicectomy was done to control

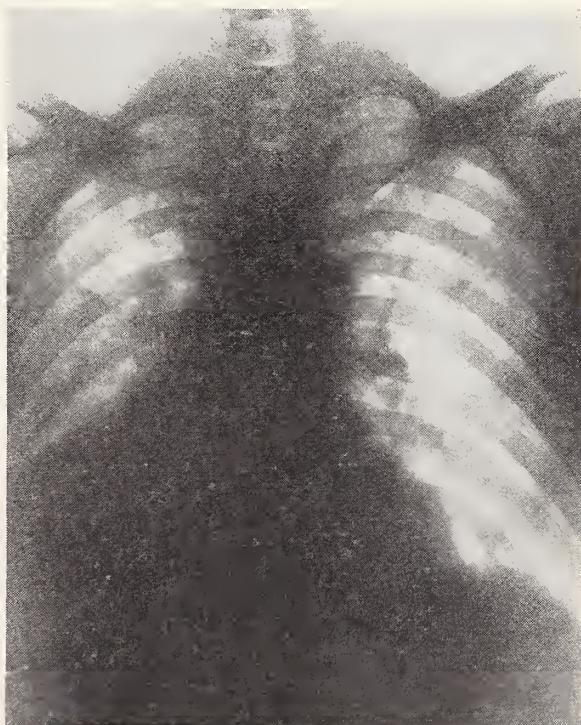


Figure 2

Case II. Portable roentgenogram. Note increased density of right lower lung field, obscuration of right leaf of diaphragm, some displacement of heart to the right and that the costo-phrenic sinus is clear.

bleeding. This it did, but seven days later she developed a massive collapse of the whole left lung. Figure 3 shows the roentgenogram taken at this time. This is the only case reported in the literature, in which collapse occurred after phrenicectomy.

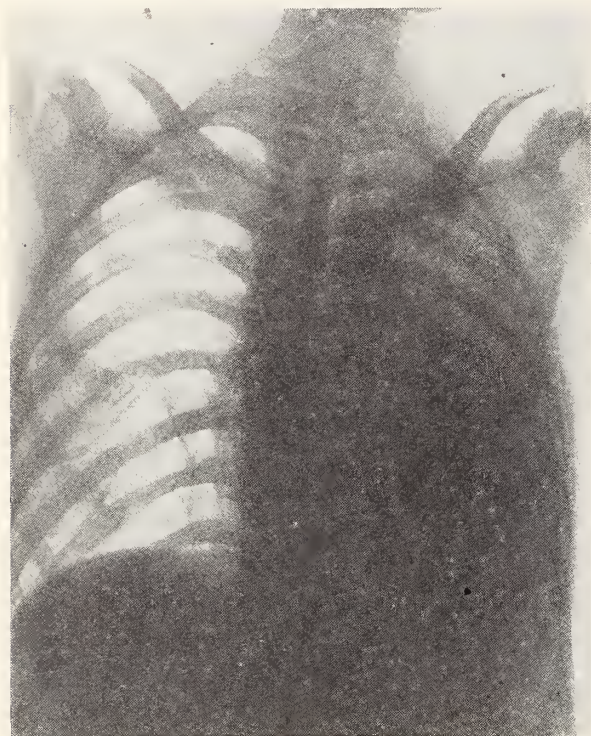


Figure 3

Case III. Portable roentgenogram. Note increased density of whole left lung. Collapse of the ribs, clear costo-phrenic sinus and obscuration of left leaf of the diaphragm. Mediastinal structures are shifted to the left. There is an osteomyelitis of right seventh rib.

tomy. She was raising large quantities of thick purulent sputum; and I believe it is more probable that the actual cause of the collapse was bronchial obstruction by this sputum, and that paralysis of the diaphragm, by making expectoration more difficult, was only a contributory factor.

Rose-Bradford⁶ reported cases following gunshot wounds and trauma of the trunk and extremities, and described cases of contralateral collapse occurring after trivial non-penetrating wounds of the chest wall. He also reported two cases that came to autopsy and did not show obstruction. He believed such collapse to be a reflex phenomenon.

Cameron⁷ believes that reflex spasm of the bronchial muscle explains the phenomenon, and quotes the experimental work of Dixon and Brodie who by vagal stimulation produced bronchial-constriction and collapse.

Carlson and Luckhart⁸ produced contraction of the sac-like lungs of amphibians by electrical stimulation of the nasal

passages, small and large bowel, kidney and bladder.

Scott and Cutler⁹ believe the process is initiated by a nervous reflex, probably largely vasomotor, which results in a narrowing of the lumen in peripheral bronchioles by venous engorgement, swelling of the mucous membrane, and elaboration of a tenacious secretion.

In a series of fourteen cases of lumbar sympathectomy done at the University Hospital, two Cases IV and V) developed atelectasis, a percentage of 14.5, which is much higher than the incidence of 0.6 per cent reported by Scott and Cutler⁹, as occurring after all types of operation. This higher incidence in cases in which a reflex through the sympathetics and vagi might well arise, and the cases reported, in which no obstruction in the bronchi have been found, lend some evidence to the fact that a reflex producing a vasomotor or a broncho-motor spasm may be the determining cause of atelectasis. On the other hand it is difficult to understand why, if this is true, collapse of the lung has never occurred during attacks of bronchial asthma.

Many observers believe that complete obstruction of the bronchus by means of thick tenacious mucus, allowing the residual air to be absorbed, is the true explanation of atelectasis. In support of this

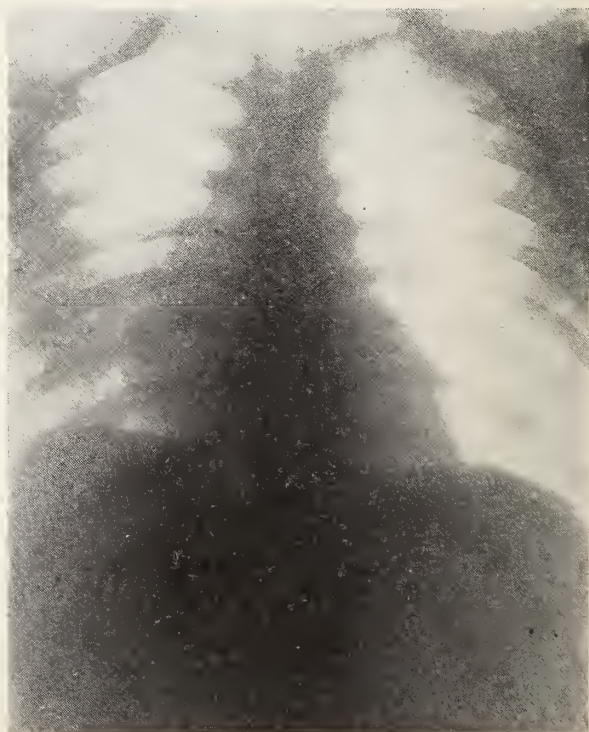


Figure 4

Case VI. Portable roentgenogram. Note area of density in right lower lobe, a slight rise of right leaf of diaphragm, clear costo-phrenic sinus and shift of the heart to the right.

theory lies the bulk of experimental and clinical evidence. Mendelsohn¹⁰ in 1844, Traube¹⁰ in 1824 and Lichtheim¹⁰ in 1879 produced atelectasis in animals by obstructing a bronchus. Recently, Coryllos and Birnbaum¹¹ have produced at will collapse of the lung of dogs by obstructing a bronchus. They state that obstruction is the only cause of atelectasis. Furthermore, depending upon the length of time of the obstruction and the virulence and type of organism present, they have been able to produce pneumonia, pulmonary abscess or gangrene. They go so far as to state that all cases of pneumonia start as an atelectasis, the sequence being first bronchitis, second bronchial occlusion and atelectasis, and third pneumonia.

Lee and Jackson^{12 13} and their co-workers have produced clinical and experimental evidence, which shows that atelectasis is due to obstruction of the bronchus by thick tenacious sputum allowed to collect by inhibition of the cough reflex by pain, posture, tight bandages, and reflex inhibition of diaphragmatic movement. They have reported several cases treated and cured by bronchoscopic drainage. They have produced atelectasis in dogs by plugging the bronchus with sputum obtained from a patient, and with an acacia mixture of the same viscosity as the sputum, and by simultaneously reproducing

the same contributory factors that they have observed in patients. Dr. Jackson has also pointed out the similarity between post-operative atelectasis and that occurring after obstruction of a bronchus by an actual foreign body.



Figure 6

Case VII. Roentgenogram two and one half days after lipiodol injection into tracheo-bronchial tree. Note density of whole right lung, collapse of ribs, clear costophrenic sinus, obscuration of right leaf of diaphragm and shift of trachea and heart to the right.

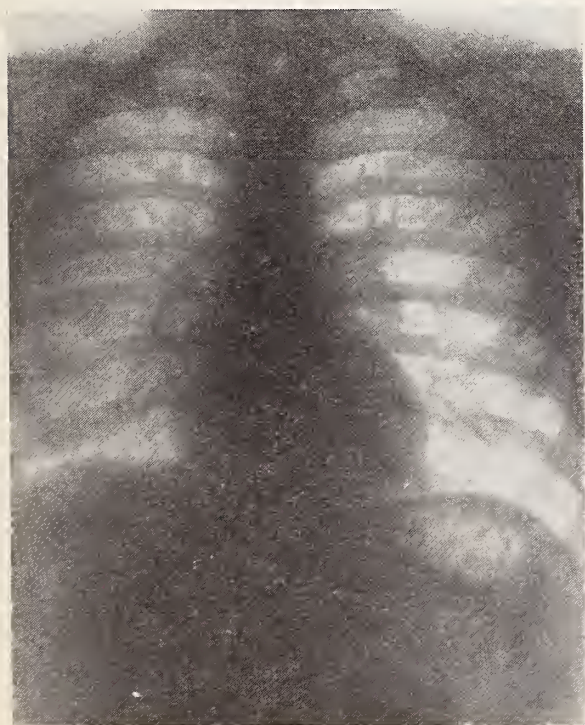


Figure 5

Case VI. 18 hours' later after coughing up blood clots. Note clearing of lung field and return of heart.

There are three cases of collapse reported in this series, and while they are not post-operative they are definitely due to obstruction of a bronchus and are interesting because they have not been reported before.

One, Case VI, was a boy who had been pinned beneath an automobile. He had a contusion of his right kidney and right lung. There was hemorrhage into the lung tissue and bronchioles, the blood clotted and caused obstruction; a partial collapse of the lung resulted. Figure 4 shows the roentgenogram taken four hours after admission, the heart being displaced to the right. Figure 5 shows the condition 18 hours later, the density of the lung being diminished and the heart back in place. Improvement occurred after he had coughed up some blood clots.

Another case (VII) is one in which a massive collapse of the right lung occurred two and a half days after lipiodol injection of the tracheo-bronchial tree. Figure 6 shows the roentgenogram.

Case VIII occurred in a man with Pott's disease. Apparently a paravertebral abscess ruptured into a bronchus. He spat up 500 c.c. of pus. Collapse of the left lung occurred, and after inhalations of carbon dioxide the lung expanded partially



Figure 7

Case VIII. Portable roentgenogram taken 36 hours after rupture of paravertebral abscess into a bronchus. Note collapse of ribs, density of whole left lung, clear costophrenic sinus, obscuration of left leaf of diaphragm, and shift of mediastinum to the left.

and later collapsed again. Two days later collapse was complete as illustrated in Figure 7. Fearing that he was in great danger of developing tuberculous pneumonia with so much pus in his bronchi and not because of the severity of his symptoms, bronchoscopic drainage was done. Figure 8 shows the roentgenogram immediately after bronchoscopy. The lung is partially areated.

It seems to me that the bulk of clinical and experimental evidence favors the obstructive theory of atelectasis. That reflex may be a causative factor cannot be denied. But probably reflex inhibition of the diaphragm, reflex inhibition of cough, posture, tight dressings that interfere with breathing and the over use of morphine and atropine contributed to the development of the condition, but actually it does not develop unless secretions collect and obstruct a bronchus.

To prevent the occurrence of atelectasis one must therefore eliminate the contribu-

tory causes and prevent the collection of mucus in the bronchi. This is best done by encouraging the patient to cough and by the administration of carbon dioxide.

Henderson¹⁴ states that shallow breathing strongly predisposes to bronchial obstruction and thus to atelectasis. Contrarywise deep breathing tends to distend the lungs and to reopen areas of atelectasis. The natural stimulus to deep breathing is carbon dioxide. He first advocated its use to prevent pneumonia after carbon monoxide poisoning, and now advocates its use in the treatment of pneumonia and in the prevention and treatment of atelectasis.

Scott and Cutler⁹ have shown that the routine hyperventilation of the lungs by administration of carbon dioxide and oxygen after all anesthetics has reduced the incidence of atelectasis from 0.6 per cent to 0.2 per cent in their experience. They advocate its use as a prophylactic and curative agent.

Fortunately, atelectasis is not a necessarily dangerous condition. Most cases will recover. Some of the cases of massive collapse if not properly treated will die, and a fairly large number will develop complications.

The treatment of atelectasis is directed to encouraging the patient to cough by turning him over on the normal side and to

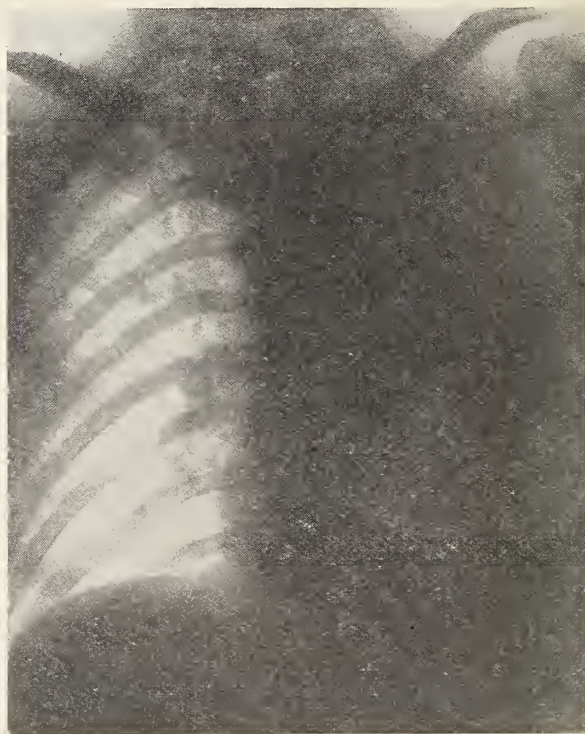


Figure 8

Case VIII. Portable roentgenogram taken immediately after bronchoscopic drainage. Note return of heart to more normal position and note reareation of left lung that has followed removal of bronchial obstruction.

produce deep breathing by administration of carbon dioxide inhalations. In my experience at the University Hospital, these two measures have been ample.

Lee and Jackson¹² strongly advocate bronchoscopic drainage and have shown some striking and dramatic results from this method. It seems to me that this should be reserved for the acute fulminating cases.

After complications have developed treatment becomes that of the complication.

CASE ABSTRACTS

Case I. G. E. S., male, age 20. Diagnosis: Acute appendicitis. Operation—appendectomy under nitrous oxide-oxygen anesthesia on May 5, 1929. Thirty-six hours after operation complained of pain in chest and shortness of breath and cough. There were cyanosis, limitation of expansion at the right base, dullness and increased voice sounds but no rales at the right base posteriorly. The heart was shifted to the right. Temperature, pulse, respirations 104, 120, 32. Roentgenogram (Figure 1) showed obscuration of the right diaphragm, increased density of the lower lobe, and displacement of the heart to the right. Carbon dioxide inhalations were given every two hours. On May 6 his temperature had dropped to 99.6, sputum was blood streaked, heart had shifted back to the left, and respirations were 20. On May 10 the temperature, pulse and respirations were normal but the physical signs did not disappear until May 18.

Case II. M. V. C., male, age 25. Diagnosis: Chronic perforating ulcer of the stomach. Operation—partial gastrectomy on January 3, 1929, under nitrous oxide-oxygen and ether anesthesia. On January 4 he complained of cough and his temperature, pulse and respirations were 101.2, 110, 25. There was some cyanosis but no abnormal physical signs were present in the chest. He vomited and glucose was given intravenously. Carbon dioxide inhalations were given every 2 hours. On January 5, the temperature, pulse and respirations were 101, 108, 25; there was some impairment at the right base posteriorly but there were no rales or change in breath sounds. On January 6 the condition was the same; cough was productive of a thick, greenish sputum. On January 7, the temperature, pulse and respirations were 101.2, 120, 20. There were dullness at the right base posteriorly, and an area of tubular breath sounds and crepitant rales at the end of inspiration. A roentgenogram (Figure 2) showed an increased density in the right lower lobe, and a small displacement of the heart to the right. On January 8, the temperature, pulse and respirations were normal. His cough gradually diminished but the signs in the right base did not disappear until January 15. A roentgenogram showed the lung to be clear on that date.

Case III. T. C., girl, age 13. Diagnosis: bilateral broncho-pneumonia, osteomyelitis right femur and left basal cavernous suppurative pneumonitis. Brought into hospital August 15, 1928, delirious and toxic. A diagnosis of bilateral pneumonia and osteomyelitis of femur was made. After operation of the femur and drainage of

an abscess of the back and after many ups and downs, including pathological fracture of the femur, she reached a chronic state in which there were a chronic osteomyelitis of the right femur and a left basal cavernous suppurative pneumonitis, a process which had shown gradual clearing. On January 2, 1929, she had a large hemoptysis and smaller ones during the next five days. On January 7, a temporary left phrenicectomy was done to stop hemorrhage, which it did. On January 14 she suddenly became dyspnoeic and cyanotic. The temperature, pulse and respirations were 102, 130, 35. There were dullness, diminished breath sounds and decreased voice sounds over the entire left lung. The heart and mediastinum were shifted to the left. Roentgenogram (Figure 3) showed obscuration of the left diaphragm, displacement of the mediastinal structures to the left, and the entire left lung to be dense, while previous roentgenogram had shown density only in the lower half of the left lower lobe. She became worse after this, signs of cavitation increased and on February 2 the lung was drained surgically. After this she began to improve. A check-up examination on July 24, 1929, shows the left lung to be healed, and there was still present a chronic osteomyelitis of the right femur.

Case IV. LaC. B., male, age 28. Diagnosis: Buerger's disease, ulcer on left big toe; later gangrene developed. On January 3, he complained of symptoms in right leg and foot. January 24, bilateral lumbar sympathectomy. January 25, the temperature, pulse and respirations rose to 102, 140, 35. There were dyspnoea, cough, and thick sputum. There were limitation of expansion, dullness, decreased breath sounds at the right base, and moderate displacement of the heart to the right. Carbon dioxide inhalations were given and the condition cleared up within a few days. No roentgenray examination was made. On February 15, 1929, amputation of the left lower leg was done.

Case V. H. H. M., male, age 39. Diagnosis: thrombo-angeitis obliterans. Symptoms confined to left foot. February 20, 1929, bilateral lumbar sympathectomy. On February 21, the temperature, pulse and respirations were 104, 140, 40. There were cyanosis, dyspnoea, and cough productive of a thick, tenacious sputum. Physical examination revealed that he lay on the left side, retraction and immobility of the left chest, dullness, variable breath sounds, decreased fremitus and rales at the left base posteriorly. Roentgenogram showed an area of density of the left lower lobe, a high diaphragm and a displacement of heart and mediastinum to the left. Carbon dioxide inhalations every two hours were given and the patient encouraged to cough. The patient's condition gradually improved, and at the end of seven days the temperature, pulse and respirations were 99, 100, 22; the physical signs had disappeared.

Case VI. P. M., male, age 14. Diagnosis: contusion of right kidney, contusion of right lung, and partial atelectasis of the right lower lobe. On July 21, 1929, he was pinned beneath a Ford coupe. He complained of excruciating pain and inability to walk. On admission to the hospital he was coughing up blood and respirations were difficult and painful; he lay on his right side. Blood pressure was 102/85, pulse 85, respiration 25, temperature 100.2. Examination revealed

limitation of expansion of the right side, dullness right base posteriorly, decreased fremitus, diminished breath sounds and many fine rales throughout right lower lobe. There were tenderness in the right costo-vertebral angle and some spasm in right upper quadrant. A roentgenogram (Figure 4) taken four hours after the accident showed increased density in the right lower lobe and some displacement of the heart to the right. The boy was given morphine and left alone. During the night and the next day he coughed up some dark blood clots. Films taken eighteen hours after admission (Figure 5) showed the condition to have cleared up. There was some argument about the diagnosis by various members of the staff, but due to the fact that there was some displacement of the heart to the right and that the condition disappeared in eighteen hours, it was agreed that there had been a partial atelectasis.

Case VII R. L., male, age 25. Diagnosis: Bronchiectasis. Admitted August 19, 1927, complaining of cough, profuse expectoration in the mornings, weakness, fever and chills. Three months before, he had had pneumonia. Examination revealed diminished expansion on the right side, dullness and fine cracking rales at the right base. On August 20 a lipiodol injection of the tracheo-bronchial tree was done. On August 23, temperature rose to 104. There was cough, pain in the chest, moderate dyspnoea, and cyanosis. The heart was displaced to the right; there were dullness and diminished breath sounds over the whole right side. On August 24 roentgenogram (Figure 6) showed the heart and trachea to be displaced to the right, the right lung opaque, and the costophrenic angle clear. On August 2, artificial pneumothorax was induced, but the reason was not stated. He made rapid improvement. A check-up examination on December 16, 1927, showed him to be well.

Case VIII, O. P., male, age 32, was operated upon for a supposed right perinephritis abscess on December 12, 1928. Culture of the pus at the time of operation showed a staphylococcus aureus. Three months later he developed swelling and pain in his right side. The wound was reopened and considerable pus obtained. He became much better for a while. Then he developed pain in the left lumbar region, pain and tenderness in the small of his back, fever, weakness and loss of weight. Walking or a jolt of any sort caused him pain. A diagnosis of Pott's disease of first and second lumbar vertebra was made. He was placed on a Bradford frame. His temperature, pulse and respirations were 102, 100, 20. His lungs were negative to physical examination on admission. On August 17 he coughed up 500 c.c. of pus and continued to cough up about 50 c.c. every hour. On August 18, his temperature, pulse and respirations were 104, 120, 28. The left chest was immobile and retracted, the apex impulse was in the anterior axillary line; there were dullness, diminished fremitus, breath and voice sounds over the whole left lung. Thoracentesis was done and was negative. Roentgenogram showed a collapse of the left lung. A diagnosis of ruptured paravertebral abscess into the left bronchus was made. Carbon dioxide inhalations were given. At 7 p. m. the left lung showed signs of expanding. He continued to raise pus. On August 19 a roentgenogram (Figure 7) showed the left lung to be completely collapsed again. On August 20, be-

cause we feared that tuberculous pneumonia might set in, a bronchoscopic drainage was done.

About 90 c.c. of thick pus was obtained. A roentgenogram immediately afterward (Figure 8) showed partial expansion of his left lung. His temperature dropped to 100 and, as he was draining his abscess in this manner nothing else was done. On August 23 the left lung had expanded, and the heart was in its normal position. Today his left lung is completely expanded, but we find a parenchymatous lesion in the left upper lobe. His temperature is normal and he no longer raises pus.

Case IX. D. L. W., male, age 20. Diagnosis: Acute appendicitis. Operation—appendectomy on March 5, 1929, under nitrous oxide-oxygen anesthesia. Thirty-six hours after operation he had a violent attack of coughing and brought up thick yellow plugs of tenacious mucus. The temperature, pulse, and respirations were 102.2, 142, 42. There were dullness, diminished fremitus, and breath sounds and numerous musical rales at right base posteriorly. Carbon dioxide inhalations were given every two hours. A roentgenogram showed an increased density in the lower right lobe, obscuration of the right half of the diaphragm and marked displacement of the heart to the right. On March 8, his temperature, pulse and respirations were normal and his condition was greatly improved. The signs in his chest gradually disappeared and on March 15 his lungs were clear and he was discharged.

Case X. J. H. L., male, age 37. Diagnosis: duodenal ulcer. Operation—posterior gastrojejunostomy on December 3, 1928, under nitrous oxide-oxygen-ether anesthesia. On December 4 his temperature, pulse and respirations were 102.2, 126, 30 and he complained of cough. There were moderate dyspnoea, slight cyanosis, dullness, increased fremitus, tubular breath sounds, showers of crepitant rales, egophony, bronchophony, and pectoriloquy at the right base posteriorly. The heart was not displaced. A diagnosis of pneumonia was made. On December 5 his temperature, pulse and respirations were 100, 100, 26. On examination there were diminished breath sounds, decreased voice sounds, and no rales. Stomach tympany interfered with examination of the heart. He was raising a thick, tenacious sputum. On December 7 the breath sounds were again tubular. Temperature, pulse, and respirations were normal. He continued to improve, had no more fever, but the signs in the chest did not clear until December 11. No films were made and even though displacement of his heart could not be made out, we believe he had atelectasis and not pneumonia.

Case XI. J. H. H., male, age 62. Diagnosis: ventral hernia, suprapubic urinary fistula, carcinoma of the prostate and contraction of the bladder neck. Operation—herniorrhaphy, excision of sinus tract and Young's punch operation on February 21, 1929, under nitrous oxide-oxygen anesthesia. On February 24 his temperature, pulse and respirations were 102, 100, 30; he became moderately dyspnoeic and cyanotic. There were limitation of expansion at left base, dullness, fremitus and breath sounds at the left base posteriorly. The left border of the heart was well outside the nipple line. No films were made, but a diagnosis of atelectasis was made and carbon dioxide inhalations given. Within three days his temperature, pulse and respirations were normal and all signs in the left chest had disappeared.

SUMMARY

1. Post-operative atelectasis or collapse of the lung is not an infrequent complication of operations. Its clinical features are described, and its relation to pneumonia discussed.

2. The larger portion of clinical and experimental evidence supports the theory of obstruction of a bronchus by thick, tenacious secretions as being the cause. Inhibition of the cough reflex, inhibition of diaphragmatic movement, and the interference with respiratory movements by posture, tight dressings and the free use of morphine are contributory factors.

3. Eleven cases are reported and of these the following conditions are new to the literature as causes of atelectasis: phrenicectomy, lipiodol injection of the tracheo-bronchial tree, abdominal sympathectomy, and rupture of a paravertebral abscess into a bronchus.

4. We believe the routine use of carbon dioxide inhalations after anesthetics will reduce the incidence of pulmonary complications.

5. We have found that inhalations of carbon dioxide, and measures to make patients cough will relieve the condition in the majority of cases.

DISCUSSION

Dr. E. J. O'Brien (Detroit): The paper is so complete that it doesn't need any discussion. I should like to reiterate one or two of the things that the doctor said. I should like to impress upon you that this is not a subject of academic interest only; it is one of very vital and practical importance. All of you who are doing surgery have run into this condition many times. The so-called post-operative pneumonias that we have been seeing for many years are, in my opinion, almost all atelectasis. The cause of the condition is an obstruction of the bronchus. That is borne out by the work in Philadelphia and at Barnes. They have not had a case of atelectasis in Philadelphia or at Barnes Hospital in St. Louis since they started the use of carbon dioxide. It is a terrifying picture, in many cases, with massive collapse post-operatively, and I think bronchoscopy under those conditions is a somewhat serious procedure and that we should bend our efforts to preventing it. Inflating the lungs just at the conclusion of an operation will do it in most cases. When a patient goes back to bed, if he doesn't clear up readily, carbon dioxide given every hour for about fifteen seconds should be done for the first six hours until it clears up.

I should like also to stress the point that it doesn't matter whether it is local or general anesthesia. High abdominal operations are more apt to be the cause of it than lower ones. The patient will not take a deep breath after a high abdominal incision. Dr. Willy Meyer said last year in St. Louis that he had recognized this condition and had always encouraged the patient to take deep breaths following gallbladder and high abdominal operations. Dr. Graham, in dis-

cussion, said that he would like to congratulate him because he himself had never been able to make anybody with a high abdominal incision take a deep breath, and that just about covers it. The only way to make them take a deep breath and inflate the lung is to give them carbon dioxide.

I think we should all stop giving atropine pre-operatively and post-operatively. If there is a plug in the bronchus, atropine, instead of drying it up, as we think it does, tends to make it more tenacious, and a more tenacious secretion in the bronchus tends to plug it up and cause an atelectasis.

I very seriously question this phrenic case of Dr. Moore's. He said he was not sure, that they thought it was just probably a contributory thing, but I don't think it has anything to do with it at all, for the simple reason that in my experience a cough is made much easier following a phrenicectomy. That is universally true. A person may have an enormous amount of sputum and have difficulty in raising it, and he almost always raises it with a great deal more ease after phrenicectomy. I don't see why, just because a phrenicectomy was done on that case, if they had a lot of mucus, he could not have had it just as well without the phrenicectomy, and I think that is what took place. I think we are doing so many phrenicectomies at the present time in cases that all have sputum (this is the only case in literature) that it is rather difficult to see why this one particular case should be singled out as the result of phrenicectomy.

Dr. Julian Moore (Closing Discussion): I thank Dr. O'Brien for his discussion. In regard to the case of phrenicectomy, we don't feel necessarily that the phrenicectomy was the cause of the atelectasis. It was interesting because of the fact that it was the only case reported occurring after phrenicectomy. I don't quite agree that phrenicectomy always makes cough and causes raising of sputum more easily, because in a small percentage of our cases just the opposite has been true. After a while they probably do raise it more easily. This particular patient I don't think was one way or the other; she raised it probably as easily as she did before. Just what influence the phrenicectomy could have had on the atelectasis on that side in a patient who had a pulmonary lesion to begin with and who had large quantities of sputum is hard to determine, but we probably feel that it was a contributory factor but that the actual production of the atelectasis was the result of the obstruction of the bronchus by sputum.

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MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., Commissioner

LANSING, MICHIGAN

THE NINTH ANNUAL PUBLIC HEALTH CONFERENCE

Health officers and public health nurses numbering 326 and representing practically every section of Michigan, both upper and lower peninsulas, attended the Ninth Annual Public Health Conference, held in Lansing the first week in January. This was the largest registration of any of the conferences. An unusual number of local speakers were on the program, giving to papers and discussions a distinctly Michigan application.

The first speaker following the formal opening of the Conference was Helen S. Mitchell, Ph.D., director of the Nutrition Laboratory at the Battle Creek Sanitarium. Discussing "Nutritional Anemia; Experimental Findings and Clinical Applications," Dr. Mitchell told of the experimental work done on baby rats in which nutritional anemia had been induced by feeding the mothers an iron-free diet. The problem was to determine what foods would most quickly bring up the hemoglobin. The importance of a trace of copper in conjunction with iron in the diet was emphasized, as well as the apparent importance of manganese. The experimental work indicated the advantages of nature's combination of these elements in foods over the use of inorganic salts, according to Dr. Mitchell.

County health departments, their purpose, the brief history of their development, the need for them, and their plan of organization and functions in Michigan were discussed by Dr. W. A. MacIntosh, Director of the Training Station at the Michigan Department of Health. Dr. MacIntosh said in concluding his paper:

"A county health department is a local health organization, established for the purpose of securing health services for all or a part of the people residing within a county. Its history in the United States has been of recent origin, dating back to 1911. Since the organization of a full-

time county health unit for Yakima County, Washington, the growth in county health organizations has been rapid, there being 467 such units as of January 1, 1929.

"The county department of health is a unit of county government and its staff consists of a full-time qualified health officer and subordinate employees. The county unit is essentially a directing force, working in co-operation with national, state and county institutions, all bound together by the common cause of conservation of human health and efficiency. In Michigan, through the leadership of the State Department of Health, provisions have been made for the expansion of county health units.

"An administrative law has been enacted, substantial subsidies have been secured and a training station for health officers and public health nurses has been established to meet any demand which may arise in this state for qualified public health officials. Moreover, in counties where the project has been approved by the local medical societies, the establishment of county departments is being recommended to the county boards of supervisors by state officials. The state has done and is doing all that it can to further this cause. The next step rests with the county boards of supervisors, for the law provides that this body shall have the power to establish county departments of health."

A symposium on diphtheria prevention took up the subject from the standpoint of the state, the county, and the city, with three speakers representing these three units of government describing immunization campaigns now being carried on.

Dr. Don M. Griswold, Deputy Commissioner of the Michigan Department of Health, gave the historical and statistical background of the present state-wide diphtheria prevention work. Dr. Griswold said in part:

"The vital statistics records of Michigan since 1872 are preserved in the archives of the Michigan Department of Health. These records are interesting and valuable in that they establish the longest line of continuous records of any state in the Union with one or two possible exceptions. They form the history and background of conditions of life and health in the state down to the present time. In studying these old records now, allowance must be made for changes in names and classifications of disease. Due allowance must also be made for accuracy and completeness in reporting, but when all these allowances are made the record is still interesting and valuable.

"Diphtheria has been unduly prevalent in Michigan since it was first recorded by official action. The degree of accuracy in the reporting of diphtheria which is being required for modern public health work probably does not begin before the year 1900. From 1900 to 1915 the number of deaths per 100,000 of population in Michigan was lower than that of the registration area except in the single year 1913.

"From 1915 to the beginning of 1930, the diphtheria death rate in Michigan was higher than that of the registration area of the United States in every single year. The excess of the Michigan rate over that of the registration area was at times as great as 50 per cent. The deaths from diphtheria in each 100,000 of population in the registration area during this period of nearly thirty years have been steady and consistent. There have been minor fluctuations, but the trend of the curve is very definitely downward. In 1900 the rate was 43.3, while in 1927, the last year for which figures are available, the rate was 7.8.

"In the year 1921 the Michigan death rate for diphtheria was 25 per 100,000 of population, which was the highest of any state in the Union. During that year there were reported to the Michigan Department of Health, 12,075 cases of diphtheria which resulted in 954 deaths. This was the largest number of cases and deaths and the highest rate which had occurred in Michigan during the previous thirty years. Because of this needless loss of life the Michigan Legislature made an appropriation sufficient to supply biologicals for the prevention and treatment of diphtheria to be furnished to all residents of the state without charge. With the appropriation

a plant was built and equipped for the manufacture of these products.

"Toxin-antitoxin shipments were first made in July, 1923. By the end of 1929, just a few over 3,000,000 cubic centimeters of toxin-antitoxin had been distributed to the physicians and health authorities of this state. This is sufficient material for the immunization of 1,000,000 people. After six and a half years of such a program in which the lives of 1,000,000 of our people have been involved, it is time to pause long enough to case accounts and see what we have been able to accomplish. The following table sets forth these figures:

Year	Cases	Deaths	Rate	Saving of almost
1921	12,075	954	25	2/3
1928	3,724	384	8.3	2/3

From this table it will be seen that the cases and deaths from diphtheria in 1928 were only about one-third of those in 1921. This saving of over 8,000 cases of diphtheria and 570 deaths from diphtheria in a single year is a really remarkable achievement."

SPECIMENS FOR AGGLUTINATION TESTS

With the recognition of undulant fever, tularemia, and para-typhoid infections, it became necessary to make a macroscopic instead of a microscopic test on all specimens submitted for a Widal test. This demands a greater amount of blood.

Physicians have responded very well to the request of the laboratory for an increased amount of blood in these specimens. Ninety-five per cent of the specimens received have been from one to five c.c. of blood.

Five per cent of the specimens were unsatisfactory, however, because they were dried blood. Until a few years ago the dried blood method for Widal tests was used in practically all laboratories. While dried blood can be used, it is not now considered as satisfactory as wet blood. For differential diagnosis of undulant fever, tularemia and para-typhoid infections, wet blood is necessary.

To insure receiving the most dependable information, physicians should send in wet blood for agglutination tests, from one to five c.c. in amount.

C.C.Y.

CHILD HYGIENE NOTES

Child Care Classes in the schools of Gratiot, Calhoun and Eaton counties have recently been completed and a new series of classes started in Livingston, Tuscola and Barry counties. These classes are

taught by nurses from the staff of the Michigan Department of Health.

The Board of Supervisors of Clinton County, at their January meeting, voted to finance half the expense of a prenatal nursing service until April 15, at which time the new board will be in session and the question will again be brought up for consideration.

The Women's Classes on the hygiene of pregnancy, which were conducted in St. Joseph County by Dr. Florence Knowlton and Miss Charlotte Ludington, R. N., have been completed. Considering the severe cold and the condition of the roads, the attendance was good.

Miss Martha Giltner, R. N., completed her work as prenatal nurse in Ingham County, January 28. The program has been entirely educational, with Miss Giltner working directly under the local physicians, though employed by the Michigan Department of Health.

Miss Giltner will go next to Alpena County, where she will carry on the same type of program.

ENGINEERING

The topographical survey for the new state hospital for the insane near Saline is almost completed. Borings are to be begun immediately to determine the character of the ground to enable the architects to design the foundations for the buildings. Well drilling will be started within two weeks, for the purpose of determining the quantity and quality of the water, particularly the mineral content.

Estimates on the cost of sewage treatment for the Traverse City State Hospital are being drawn up in the Bureau of Engineering. These will furnish the basis for negotiations with the city for a joint plant to care for both the city and the hospital, or for a state owned plant if the combined plan does not prove acceptable.

More than 5,500 plumbers are already registered with the Michigan Department of Health as a result of the new state plumbing law. A total of 2,000 master plumbers and 2,500 journeymen plumbers are licensed, and about 1,000 applications for license are awaiting the decision of the Examining Board. A second hearing is to be held on the plumbing code on February 7 in Lansing, at the request of a group of Detroit builders.

DIPHTHERIA IMMUNIZATION IN ARENAC AND GLADWIN COUNTIES

During the month of August, Miss Nash of the Bureau of Child Hygiene and Public Health Nursing was in Arenac and Gladwin Counties, organizing Child Care classes. While there she made the rounds of the physicians of these two counties to invite their co-operation and suggestions in Child Care classes. Each physician was asked

"How much toxin-antitoxin have you given this past year among your patients?"

Without exception the answer was, "None at all." The next question asked was,

"Are the parents of your county informed concerning the value and benefits of toxin-antitoxin?"

The almost universal answer was

"They seem to be, but they do not bring their children to the office for its administration."

The next question was

"Would you co-operate with the State Department of Health if we attempt to organize the sentiment in favor of toxin-antitoxin, and crystalize that sentiment into action, which would get these children immunized?"

The physicians of these two counties were unanimous in their approval of such an undertaking.

When the supervisors met in October, Dr. Howard of the Bureau of Epidemiology, of the Michigan Department of Health, presented the project to the boards in these two counties. Previously Miss Nash had called on school authorities—the school officers, Parent-Teacher groups, and other influential people who were interested in the conservation of child life. She urged them to take up this matter with the supervisor who represented them on the board and with as many other supervisors as they knew intimately. The supervisors, therefore, were fairly well informed on the subject, not only as to its technical procedure, but, what is more important, as to the public sentiment behind such a movement.

After Dr. Howard's formal presentation of the subject to the board of supervisors of Arenac County, the board appropriated \$500.00 to be used for this purpose. The supervisor of Gladwin County appropriated \$300.00 for this purpose. In both counties there was a tacit understanding

that if the amount were not sufficient more would be forthcoming. The Board of Supervisors appointed a Diphtheria Prevention Committee consisting of all of the physicians of the county and the County Commissioner of Schools. The County Commissioner of Schools was the chairman and Miss Nash was the field representative and organizer.

Miss Nash and Miss Ludington, also from the staff of the Bureau of Child Hygiene and Public Health Nursing, visited each school in Arenac County and talked to the children on the subject of diphtheria prevention by toxin-antitoxin. The children were given the diphtheria letter issued by the Michigan Department of Health to parents and guardians which has the request at the bottom for parents or guardians to sign, that their children be immunized.

It was originally planned to meet the Parent-Teacher Association and any other groups of parents of school children that were available. Miss Nash and Miss Ludington were surprised to find that the parents knew enough of the value of toxin-antitoxin so that further information was not necessary. Practically every school in the county returned the request slips 100 per cent, thanks to the teachers.

The work was then organized in the sixteen centers, representing from two to five schools each. Work was done in the school rooms. The children were encouraged to watch the progress of the work and to make such comments as came to their minds. Each teacher kept the request slips and kept a roster of the children who were inoculated. The work was arranged at times that were suitable to the physicians and all the physicians in the county took part in the work.

When the physicians arrived at the designated time and place, they found the children and everything else ready to start work. The nurses had the toxin-antitoxin ready, needles and syringes having been boiled before the arrival of the physicians. When the work was organized in this way at one of the larger centers, 200 children were inoculated in one hour. This was a great saving of the physicians' time as all work except the actual inoculating was done for them. There are a few over 2,000 children in the school group in each of these two counties, and approximately 100 per cent of this entire group was immunized.

Another pleasing feature of the work in these two counties was that there were a

large number of mothers who came to the centers bringing their children of pre-school age. Now that the school children of these counties are almost 100 per cent immune, the only possibility for diphtheria is among the pre-school group. For this reason, parents with pre-school children were always included in the invitation and were included in all of the newspaper publicity.

When work was being finished, preparatory to the nurses leaving for similar work in other counties, the nurses asked the doctors if they were having patients come to their offices for diphtheria immunization. The answer was that approximately 100 per cent of the school children had been taken care of at the schools and likewise that many pre-school children were immunized. In spite of this there were a surprising number of pre-school children and adults that were coming to the physicians' offices to be immunized as a matter of private interest. In other words, the doctors in these counties were doing more diphtheria immunization in their private practice than they had done in the six years previous.

A careful account of the amount of time spent by each doctor was not kept. None of them spent more than twenty-five hours at the work which includes the time for travel. If the \$500.00 is divided evenly among the four physicians, it would bring each \$125.00, or \$5.00 per hour for their time.

Approximately the same narrative would apply to the immunization program in Gladwin County.

PREVALENCE OF DISEASE				
	January Report Cases Reported			
	December	January	January	Av. 5 yrs.
	1929	1930	1929	
Pneumonia	495	709	1,752	879
Tuberculosis	544	221	361	438
Typhoid Fever	13	11	16	32
Diphtheria	481	403	430	422
Whooping Cough	424	809	628	665
Scarlet Fever	1,098	1,580	1,243	1,298
Measles	594	1,258	531	1,627
Smallpox	269	356	104	137
Meningitis	70	117	89	26
Poliomyelitis	9	2	4	5
Syphilis	1,131	1,623	1,536	1,324
Gonorrhea	634	962	927	808
Chancroid	27	25	8	11

CONDENSED MONTHLY REPORT				
January, 1930				
Michigan Department of Health Laboratories				
Lansing Laboratory—				
Throat Swabs for Diphtheria	+	—	+—	Total
Diagnosis	31	604	.....	1077
Release	60	115	.....
Carrier	6	261	.....
Virulence Tests	12	7	.....	19
Throat Swabs for Hemolytic Streptococci				544
Diagnosis	158	119	.....
Carrier	24	243	.....
Throat Swabs for Cincin's	65	574	.....	639

Syphilis	9197
Kahn	1271
Wassermann	2
Examination for Gonococci	181
B. Tuberculosis	1806
Sputum	84
Animal Inoculations	473
Typhoid	1
Feces	7
Blood Cultures	27
Widals	4
Urine	47
B. Abortus	58
Dysentery	30
Intestinal Parasites	20
Transudates and Exudates	421
Blood Examinations (not classified)	157
Urine Examinations (not classified)	410
Water and Sewage Examinations	340
Milk Examinations	42
Toxicological Examinations	3
Autogenous Vaccines	2
Supplementary Examinations	244
Miscellaneous Examinations	651
Unsatisfactory Specimens	296
Total for the Month	16846
Cumulative Total (fiscal year)	116047
Increase over this month last year	2259
Houghton Laboratory—Examinations made—Total for the Month	2009
Cumulative Total (fiscal year)	13879
Increase over this month last year	636
Grand Rapids Laboratory—Examinations made—Total for the Month	7479
Cumulative Total (fiscal year)	45928
Increase over this month last year	841
Typhoid Vaccine Distributed, c. c.	1030
Diphtheria Antitoxin Distributed, units	19435000
Silver Nitrate Ampules Distributed	9216
Scarlet Fever Antitoxin Distributed, Pkg.	173
Scarlet Fever Toxin Dick Test Distributed, c. c.	1240
Scarlet Fever Toxin Immunization Distributed, c. c.	4580
Smallpox Vaccine Distributed, points	20110
Bacteriophage Distributed, c.c.	3048

TRUTH ABOUT MEDICINE

EXCRETION OF BARBITAL

Sir Maurice Craig holds that barbitol preparations may be taken for years without producing deleterious effects. This view has received some experimental verification. On the other hand it has been held that in certain conditions—Manic-depressive insanity, constitutional psychopathic inferiority and psychoneuroses—its use may lead to habit formation and that to such patients these drugs should never be administered. (Jour. A.M.A., January 4, 1930, p. 35).

VIOSTEROL VERSUS COD LIVER OIL.

Cod liver oil and viosterol solutions are by no means to be regarded as therapeutically equivalent. Cod liver oil cannot be replaced by the newer irradiated products except so far as the antirachitic factor vitamin D is concerned. Cod liver oil is also a carrier of the indispensable vitamin A. Furthermore, cod liver oil contains di-

gestible and assimilable fats. (Jour. A.M.A., January 4, 1930, p. 53.)

RESUSCITATIONS AND INTRACARDIAC INJECTIONS

The power to revive the dead is one that the physician is often, but vainly, expected to exhibit. The alleged miracles of such revivals by injecting epinephrine into the heart are always widely reported in the newspapers. Physicians who have heard of these alleged resuscitations are tempted to employ the same means. If the death was real, no harm and no benefit results. Revival follows sometimes, perhaps not because of the treatment but in spite of it. In such cases there is indeed grave danger that serious injury may follow from the treatment that the patient has received. The evidence seems conclusive that, if the patient revives after such an intracardiac injection, he would have revived without it. Intracardiac injection is not a justifiable measure for resuscitation. (Jour. A.M.A., January 11, 1930, p. 107.)

MULTIPLE NEBULIZER—IMPROVED ACCEPTABLE

The Council on Physical Therapy reports that this apparatus has been found acceptable for inclusion in its list of accepted physical therapy apparatus. "The Multiple Nebulizer—Improved" (American Technical Laboratories, Glendale, Calif.) is stated to be an apparatus that atomizes or nebulizes oils or other liquids. It is so constructed that any such medicament can be administered alone or in combination with other medicaments without interruption of treatment. (Jour. A.M.A., January 25, 1930, p. 265.)

EFFECTS OF CINCHOPHEN

Purpuric, urticarial, or scarlatiniform eruptions have been reported by many observers following the administration of cinchophen. They may occur with or without edema. Gastro-intestinal disturbances, from epigastric discomfort to acid eructations and heartburn, are the commonest expression of intolerance to cinchophen. These may be avoided by the giving of an abundance of water with the drug, and 1 Gm. of sodium bicarbonate, though the latter should be given separately and not mixed with the drug. By using neocinchophen, one may avoid usually the symptoms of gastric irritation. Sometimes cardiovascular disturbances have been noted. By far the most serious results of cinchophen intoxication result from injury to the liver, which may even go on to a fatal acute yellow atrophy. (Jour. A.M.A., January 25, 1930, p. 283.)

COD LIVER OIL, VIOSTEROL OR SUNLIGHT FOR RICKETS

Cod liver oil, viosterol and ultraviolet rays are generally accepted as specific agents in the prevention and cure of active rickets in infants. Their relative merits are still under investigation. Cod liver oil contains the valuable vitamin A in addition to vitamin D. Viosterol is of advantage because of the ease of administration and its concentration. Ultraviolet rays are undoubtedly a valuable therapeutic agent when under controlled supervision. Their effect on general nutrition and resistance as well as on the calcium retention is good. Their use to the exclusion of vitamin D or viosterol seems unwise. A combination seems most desirable when sunshine is not available. (Jour. A.M.A., January 25, 1930, p. 283.)

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MARCH, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

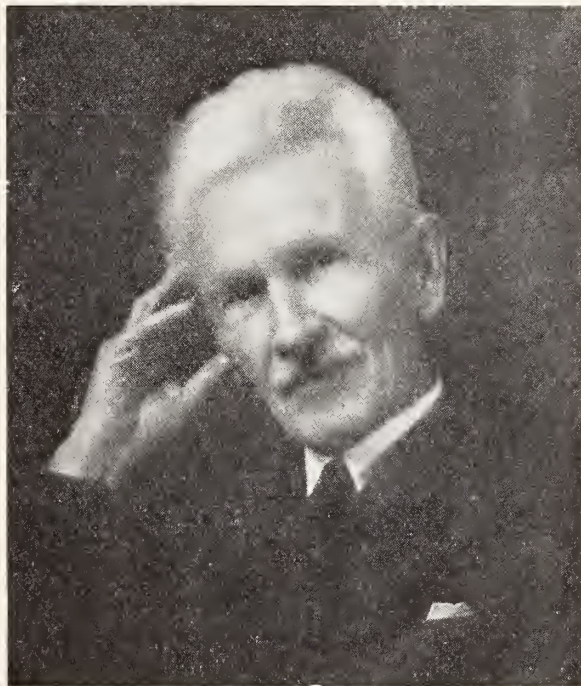
MICHIGAN'S MEDICAL HISTORIAN

In the February number of this Journal the completion of the editorial work on the medical history of this state was announced and also that the history is in process of publication. The time seems opportune to comment on the labors of the editor whose unremitting zeal brought the work to completion. When the Council of the Michigan State Medical Society four years ago conceived the idea of putting into permanent form the story of the struggles and experiences and the sacrifices of the pioneer physician as well as his successors, Dr. C. B. Burr of Flint, Michigan was chosen as editor and historian for the work. No happier choice could have been made. Dr. Burr's long and busy life has brought him into intimate relations with many leaders of the profession who have long since passed away.

Not only this. Dr. Burr is a writer of

distinction. His literary output has been voluminous. The semi-centennial volume of the American Neurological Association, covering the period 1875 to 1924, lists the titles of sixty-seven contributions to various medical Journals. Dr. Burr, however, has written on a variety of subjects always with almost unexampled insight and clarity. While his professional interests have been largely in the field of neurology and psychiatry he has been in the fullest sense a citizen of his city and state.

Dr. Burr was born in Lansing, Michigan,



Dr. C. B. Burr,

Editor of the Medical History of Michigan

in 1856. He attended the public schools and the Olds and Rorks Academies in Lansing. He was graduated from the College of Physicians and Surgeons in New York in 1878. Perhaps there is no better testimony to a man's integrity and ability than the estimate of his professional confreres. He was admitted to the American Neurological Association in 1906 and has been Secretary, Vice-President and President of the American Psychiatric Association; President of the Michigan State Medical Society, and Chairman of its Council; and President of the Detroit Society of Neurology and Psychiatry. In addition he is a member of the American Medical Association, the Wayne County and Genesee County (Mich.) Medical Societies, the Detroit Academy of Medicine, the Societe Medico-Psychologique of Paris and Fellow of the American College of Physicians. Dr. Burr was formerly a member of the Michi-

gan State Board of Registration in Medicine and Federal Appeal Agent at Flint, Michigan, (1917). He was a member of the Park Board of Flint, and is Director of the Genesee County Savings Bank and also Director of the First National Bank of Flint, Michigan. He was Medical Superintendent of the Eastern Michigan Asylum at Pontiac (1889-94) and Medical Director of "Oak Grove" at Flint (1894-1920). Since this time he has retired from his professional work.

Dr. Burr's life has been characterized by a happy philosophy. He has a saving sense of humor for all occasions, a felicitous possession which insures one a welcome everywhere and always. He is incapable of pettiness. The patience, essential sweetness and magnanimity of his nature, his friendly and gracious temperament, his broad sunny humanity endear him to all.

Besides the History of Michigan Medicine we are pleased to announce also the sixth revision of Dr. Burr's Practical Psychology and Psychiatry.

THE COUNTY MEDICAL SOCIETY

One of the interesting high lights of the meeting of County Secretaries held at the headquarters of the American Medical Association was an address by the Secretary of the American Medical Association, Dr. Olin West. (The address is published in this number of the Journal). The subject was the logical one for this occasion. Dr. West stressed the importance of the County Medical Society as the basic factor in organized medicine in the United States. The State Societies and the American Medical Association can be no stronger nor greater than the component parts that go to make them. The speaker counselled greater care in the election of members of the County Society. Every candidate should be subjected to careful scrutiny before he is admitted to membership. The primary purpose of medical organization was the promotion of the art and science of medicine and the promotion of public health. No one, therefore, who is not in accord with this purpose should be a member of the County Medical Society. In a word the County Society should aim to increase the professional efficiency of its members.

Care should be exercised in providing a good scientific program. It should be concerned with those problems that physicians meet with in their work every day

and not with the rare and exceptional case. County Societies would do better to deal with the commoner professional experiences and to aim at developing the members as speakers and writers.

Dr. West emphasized the importance of selecting officers for the society and particularly the County Secretary. A good secretary should be retained in office for at least two or more years.

While the promotion of the art and science of medicine must be regarded as basic, the material interests of the profession should not be neglected. The County Society should keep itself intelligently informed in regard to pending legislation and should be at all times ready to co-operate with the legislative committee of the State Society. The members of the county society are urged to study the narcotic law and to inform themselves in regard to government regulations. Occasionally physicians with years of honorable practice got into serious difficulties due to innocent technical violations of the law. It is said that approximately three hundred physicians were threatened with malpractice suits each year. There were a number of reasons for this. The medical society should protect its honorable membership. The society as a whole should co-operate to improve hospital administration. It should co-operate with boards of health in the interests of preventive medicine. There should be at least one physician on every board of education in the United States. We cannot have education without health and we cannot have health without sanitation and the physician member of the board of education should be expected to report regularly to the County Medical Society.

THE STOMACH AND COLON

Dr. T. Wingate Todd, Professor of anatomy of Western Reserve University, who was the ninth Beaumont Foundation lecturer presented the results of special researches on the alimentary tract. The work consisted of X-ray studies of the normal stomach and intestines, the subjects being medical students of the University. Dr. Todd stressed the importance of the study of living anatomy for which there is no method equal to the X-rays for investigation of internal organs. Every other method showed the structures under abnormal conditions. The same students were studied at different intervals by means of the contrast meal and fluoroscope and films

and in the study of living anatomy the students were encouraged to observe and to study one another. The effects of mental tension or fear were shown clearly in the atonic and relaxed condition of the gastric walls contrasted with the normal or orthotonic condition of the viscus when the mind is at ease. A suspension of barium sulphate and water produced a more vigorous peristaltic action than the suspension in buttermilk or lactic acid milk which is more commonly used by roentgenologists. The addition of essence of peppermint had the same effect on gastric peristalsis as doses of 30 grains of sodium bicarbonate namely marked inhibition. Cold applied to the abdomen or taken in the form of cold drink was shown to have also a retarding influence upon the gastric movements. On the other hand heat, whether applied externally a sufficient length of time to actually raise the temperature of the stomach was found to have the same effect as warm food, namely stimulation of the gastric peristalsis.

While the stomach is affected by emotional disturbance or shock, the large bowel is influenced by anxiety states, but the effect is much more prolonged, in some instances over several days. A demonstration was made by both stationary and moving films of the colon under normal conditions also under conditions of mental perturbation. The first showed a normal colon with normal haustrations; in the second the haustrations of the transverse colon were broken up and the colon appeared markedly spastic.

These lectures will be published within the next few months when they will be available to the medical profession. While no clinical or therapeutic conclusions were made, practical inferences were obvious to the observer.

"THE DOCTOR"

Everyone is familiar with the famous picture, "The Doctor", by Luke Fildes, whose death was announced some time ago. According to the Strand Magazine of 1893 quoted by the Canadian Medical Association Journal:

"It appears that Mr. Fildes loved to paint the people, the country folk—to paint them as they were, historically and artistically. "The Doctor" was intended as a portrait of the English physician of 1890 in a home of that period where a little child lay desperately ill. The surroundings were such as the artist had sketched in his journeys from Devon to Inverness to get the character of the people and the general background for the picture. The cup and basin and odds and ends

in furnishings were purchased during these wanderings. He sketched many interiors in cottages and fishers' huts and then returned home and built exactly to size in the end of his studio the one he wanted for his picture. It was a most substantial structure, even the massive rafters were there.

"The lamp was lighted and the rays of early dawn were coming in through the windows. For the child Mr. Fildes took his own little boy. When he wanted his morning sleep he used to be brought up to the studio. The nurse would watch him as he lay on the chairs. As he slept the artist painted. You see the hand falling down by the side helplessly? One day he had just finished the picture with the child's hands tucked up close together at the neck, as children sleep, when he noticed his boy's hand fall over the side. He thought it exquisite—so pleasing and pitiful. He altered the hands in the picture at once, and painted the left one as you see it now.

"The artist had difficulty in securing as a model for the doctor a person with the decision of manner that he had in mind, and so he levied freely on five or six of his friends for a feature resembling his ideal and got them to sit for him. He said this picture had remained in his mind for a very long time, though eventually it proved the quickest painted of any he had ever done.

"He received many letters asking for the name of "The Doctor", one being from a lady who was ill and who asked for his address, saying that if she only had a doctor like him to attend her she felt sure she would soon be restored to health."

"The Doctor" represented the type known as the family physician. The January number of the Survey Graphic reproduces a famous painting, "The Children's Surgeon", in which Dr. W. S. Baer is the subject of the portrait. The surgeon gowned for the operating room is shown standing at the side of an iron cot in which lies a sleeping child. The huge white figure of the doctor stands out against the dark background of an open door while the light from a window falls upon the sleeping child. Whether this picture will become as universally known as that by the brush of Luke Fildes, time only will reveal.

NOTE OF SYMPATHY

The many friends of Dr. Louis J. Hirschman, immediate past President of the Michigan State Medical Society, extend their sincere sympathies to Dr. Hirschman and family in their sad bereavement in the loss of wife and mother.

A YEAR OF CENTENARIANS

Eighteen centenarians died in Great Britain and Ireland during 1929, on the authority of The London Times. Fifteen were women, of whom eight were married. The oldest centenarian was a single woman of 104 years. Mr. C. B. Gabb supplements the list of home centenarians by drawing attention to others outside the British Isles

who, dying in 1929, had turned the century corner.

The most remarkable was a Turk, Zaro Aga, who at the age of 143 (which must probably be taken on trust), died from an accident while embarking at Constantinople to fill a film engagement in the United States.

Radu Merarul, a Rumanian, lived to be 120, and the year before his death was selling flowers, vegetables and fruits. In the added list was Thomas Sloan, an Irish cobbler, who had emigrated to the United States in 1826, was said to have made boots for President Lincoln, and died at 116. Luigia Caselli, known as "the Grandmother of Piedmont," lived under nine Popes and survived until she was 108.

In countries where vital statistics do not go back far enough, records of centenarianism must be viewed with suspicion. The United States census of 1930 will no doubt eclipse the list of The London Times, although it may be difficult to prove the century in every case.—New York Times.

THE EDITOR'S EASY CHAIR

PRACTICAL PSYCHOLOGY*

*"O latest born and loveliest vision far
Of all Olympus' faded hierarchy."*

—Keats in his "Ode to Psyche".

Psychology is one of the newest sciences. The time was and not so long ago when there was some doubt as to where it belonged, when it was given a place in the college curriculum in the department of philosophy. It is even yet one of the least advanced of the sciences compared with physics or chemistry or anatomy. The reason is apparent inasmuch as psychology deals with the mind, whereas the other named sciences are concerned with material things. Man has spent greater effort in trying to learn something about himself and yet he has made less progress so far as accurate knowledge is concerned in acquiring information about his own thought processes than any other thing he has attempted to learn.

The term psychology is often used in a loose and very vague way. How frequently it is exploited by the charlatan who advertises to make his victims successful in business, or in love, or what not, in a course of so many lectures. And even those who do not live by swindling the unsuspecting public use the word "psychology" as connoting some vague mental reaction that might be expressed to better advantage some other way.

Psychology in its true sense has had its great students in this country from the time of Royce over thirty years ago, who identified it with philosophy. The name best known is that of

William James, a medically trained man who taught both philosophy and psychology many years at Harvard University. James did a great deal to popularize the subject and though he has been dead for over twenty years his works are still important. Wundt, the German psychologist, emphasized its physical or physiological basis, hence we had physiological psychology. Then we have the more modern Freudian psychology which I shall not attempt to define, and Behaviorism the chief exponent of which is Watson. Behaviorism appears to be a sort of scientific determinism or Calvinism applied to science.

While psychology is one of the youngest sciences it bids fair to be one of the most valuable. It has occupied some of the ablest minds of the past quarter of a century among them such persons as Stanley Hall, Havelock Ellis, Adler, Jung, Freud, Tichenor, Jastrow, Pillsbury and McDougall. It is beginning to point out how we may avoid disaster and how we may regain the right track. Psychology is now regarded by all educated people as a science and the subject of scientific study, experiment and careful measurement, observation and deduction. It is coming out of the clouds and making its dwelling place among men.

BURR'S PRACTICAL PSYCHOLOGY

All this as prefatory to reviewing Dr. C. B. Burr's latest revision of his Practical Psychology and Psychiatry first published in 1894, as a Primer of Psychology and Mental Disease, and revised for the sixth time. The latest revision has been very thorough, increasing materially the size of the book. We have stressed the importance of a working knowledge of psychology for the practicing physician. If he is to practice or teach mental hygiene and thus fill the role of first line defense against the milder nervous and mental disorders, he should know something about the science of the mind. It is as necessary to one who would minister to a mind diseased, as is physiology to those who minister to the ills that flesh is heir to. Dr. Burr's book will be found of great value to the physician in the broadest sense. The matter is well arranged and the writer's diction is characteristically clear and convincing. There is not a dull page in it. Following the lead of Wundt, the author has ever kept before him the physiologic background of his subject.

I am particularly interested in the manner in which he treats some of the more controverted phases of psychology, and turn to Chapter IV, where he discusses Behaviorism. The doctrine of Behaviorism maintains that psychology concerns itself with what can be observed and that consciousness is therefore a meaningless term. The Behaviorist therefore drops from "his scientific vocabulary all subjective terms such as sensation, perception, image, desire, purpose and even thinking and emotion as they were subjectively defined." Dr. Burr sums up the situation by saying:

"This leaves such a scheme as that featured in this book not a leg to stand on. But nevertheless one may sit down and reflect if he still has the aid of that subtle, intangible, undefinable something called 'consciousness'.

"But let there be no mistake. The study of behaviorism is tremendously important on its practical side. Through it, trends, tendencies, motivation of conduct are often revealed, and these when asocial, egoistic, cruel, indifferent, intro-

* Practical Psychology and Psychiatry. For use in training schools for attendants and nurses and in medical classes, and as a ready reference for the practitioner, by C. B. Burr, M. D., Late Medical Director Oak Grove Hospital, (Flint, Mich.), for Mental and Nervous Diseases; Member of the American Psychiatric Association, of the American Medical Association, of the American Neurological Association, of the Detroit Society of Neurology and Psychiatry, of the Michigan State Medical Society; Fellow of the American College of Physicians, Corresponding Fellow Detroit Academy of Medicine; Foreign Associate Member of Societe Medico-psychologique, of Paris, etc. Sixth Edition, Revised and Enlarged with Illustrations. F. A. Davis Company, Publishers, Philadelphia, Pa. Price \$2.75.

spective, may be corrected or modified, if understood and tactfully met. It is the attitude of the Behaviorists toward the interpretation of the entire psychology problem that, in my opinion, calls for criticism."

On page 30 reference is made to "self expression" as follows: "There has been too much latitude allowed children in 'self-expression'—a favorite word with sweetness and light propagandists. Self confidence should be encouraged; egoistic, invariable, self determination as to conduct, discouraged."

A commendable feature of the work is clearness of definition of terms particularly in the sections of the work devoted to abnormal psychology. This fact alone makes the book a splendid introduction to the larger and more technical works on psychiatry.

Part II discusses Symbolism in sanity and in insanity and symbolic art. In this field Dr. Burr was one of the earliest of American contributors. Part III contains twelve chapters discussing the different forms of insanity. Part IV is concerned with the management of these cases from the medical and also from the nursing viewpoints. Part V takes up the subject of *prevention* under three interesting chapters on Mental Hygiene.

IMPORTANCE OF MENTAL HYGIENE

The author in dealing with the subject of Mental Hygiene emphasizes the subject of child guidance. The keynote of his advice is the importance of suitable environment and employment and the encouragement of selfreliance. The importance of a taste for reading good literature is stressed. The author pays tribute to the Boy Scout movement particularly for the boy of urban surroundings. He quotes approvingly Dr. L. F. Barker in the matter of overcoming Day Dreaming and Autistic Thinking:

"During adolescence the child should be encouraged to face the real situations of life, when confronted with them, and should be kept from turning away from them or denying their existence or feeling sufficient satisfaction in the wish fulfillments of day-dreaming and phantasms. The so-called 'autistic thinking' which avoids reality and which indulges in pleasurable emotional states at the expense of wholesome objective activity is to be recognized when it exists and any excess of it is to be combated, not directly by the prohibition of the pleasure seeking automatism but rather indirectly by sympathetic guidance in the process of 'reality thinking' and by the encouragement of objective activities that compel plungings in the cold waters of actuality, that force swimming to avoid sinking, thus educating to self-reliance."

In conclusion says Dr. Burr: "Mental hygiene implies good food, temperance in all things, systematic work, suitable exercise, education in useful lines, boy-scout activities, botanizing, walking (the automobile is used too much), establishing habits of self-control and respect for 'mine and thine'. These are all contributory to 'mens sana in corpore sano.' The latter is idealistic—there is no such thing as a (perfectly) sound mind in sound body (even a Roosevelt was near-sighted) but attainment so far as possible of the goal in view would mean much to the structure of civilization."

These last chapters should be read, learned and

inwardly digested by all parents of very young families.

ROENTGENOGRAPHIC INTERPRETATION OF FUNCTIONAL REDUCTION OF FRACTURES

The normal anatomic relationship of joint surfaces and anatomic landmarks Edward Holman Skinner, Kansas City, Mo. (Journal A. M. A.), says may be plotted with almost geometrical exactness on roentgenograms taken in common standard positions. There are certain regional surgical axioms that guide the surgical estimation of proper reduction of fractures at the joints. These axioms have been well known, but their appreciation has probably been denied the continuous merit they deserve because the extensive use of roentgen examinations has relegated them to the background. The roentgen rays have not changed anatomic landmarks or altered surgical axioms. It is with the idea of interpreting roentgenograms with due regard to recognized surgical principles that Skinner discusses the ankle, wrist and elbow from a roentgen-anatomic standpoint. He says that the extensive distribution of roentgen ray apparatus tends to reduce the necessity of clinical palpation. But there is the demand for the more accurate intelligent interpretation of roentgenograms. If mechanical means of diagnosis and prognosis are to be dependable and to persist, there is the obligation and demand for precise methods of plotting mechanical lines on dependable roentgen exposures. Normal anatomic relationship of landmarks and normal joint lines on roentgenograms do correspond with one another. The functional reduction of normal joint relations is more important than mere anatomic reduction of fragments.

CALIFORNIA CANCER RESEARCH RECALLS SOKOLOFF EXPERIMENTS

The success of two San Francisco physicians in treating cancer by extracts of the adrenal cortex gland recalls the researches of Dr. Boris Sokoloff of Prague and New York, who discovered and reported to the International Physiological Congress recently that cancer growths are killed in a few hours by a mixture of adrenal cortex extract, an iron salt and a chemical, pyrrol blue. Dr. Sokoloff has recently been working at the Institute of Cancer Research at Columbia University and he formerly worked at the Rockefeller Institute for Medical Research. No human beings have been treated by Dr. Sokoloff's methods, all research being done on animals. He emphasized in his reports that he had not developed a "cancer cure" and that the work was entirely in the experimental stage. When cancerous mice and rats were treated with his preparation the malignant tissue was reduced to a liquid, turned black and finally became hard. The healthy tissue was uninjured and the animals lived for months whereas otherwise they would have died.

His observation that cancerous animals had a sort of fatty degeneration of the adrenal cortex led Dr. Sokoloff to the theory that there must be some kind of physiological connection between malfunction of that gland and cancer. The mixture used by Dr. Sokoloff differs from that used by the San Francisco experimenters in that it includes a chemical that gives off oxygen which is deadly to the cancer cells.—Science Service.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. B. R. Corbus is spending a few weeks in Florida.

Your annual dues are payable before April 1st to escape suspension. Send your check today to your County Secretary.

Have you mailed your order for the new Medical History of Michigan to the Secretary yet? The price of the two volumes is \$10.00. The first volume will be ready for distribution in a few weeks. The sum of \$5.00 should accompany each order.

The regular monthly meeting of the Washtenaw County Medical Society was held at the Allenel Hotel, Ann Arbor, February 11th. Dr. Carl E. Guthe, Director of the Museum of Anthropology of the University of Michigan, addressed the meeting on Prehistoric Man.

We have received the reports of the clinic held in Flint late in January. These reports will appear in the April number of this Journal. Suffice it here that the Flint clinic was well attended and marked interest was shown on the part of all present.

The following attended the annual February Conference on Medical Education and Licensure held in Chicago under the auspices of the A.M.A.: Doctors J. D. Bruce, W. H. Marshall, Nelson McLaughlin, Rollin Stevens, W. H. Morril, and F. C. Warnshuis.

The severance of the connection of Dr. Hugh Cabot as Dean and Director of the Department of Surgery was announced on February 7th. Dr. Cabot came to the University of Michigan in 1919 as professor of surgery. Two years later he was made Dean of the Medical School and Head of the Department of Surgery following the resignation of the Late Dr. Victor C. Vaughan.

Dr. Morris Fishbein, Editor of The Journal of the American Medical Association, predicts the largest attendance in the history of the Association at the annual convention in Detroit in June. He has returned recently from the Pacific Coast where in conversation with many doctors he was impressed with the fact that a large contingent of medical men from the extreme west were looking forward to the event.

The Annual Orthopedic Foundation Lecture under the auspices of the Wayne County Medical Society will be delivered Tuesday evening, March 25th at the Wayne County Medical Society Auditorium. The lecturer is Dr. H. Winnett Orr of Lincoln, Nebraska. The subject is "A New Era in the Treatment of Osteomyelitis and Other Infections." The lecturer will discuss (1) The

Period Before Lister, (2) The Antiseptic Period, and (3) The New Era. An invitation is here extended to the members of the Michigan State Medical Society.

The London Lancet has this to say of Dr. Don H. Duffie's book, "A Book for Us Diabetics and Our Doctors." "Dr. Duffie's book is written in a very breezy style, and is full of quaint expressions. More than half of it is intended for patients, and the clear directions are illustrated by numerous photographs; those of the method of preparing the syringe and giving the injection are very valuable. The recipes are good." Dr. Duffie is practicing at Central Lake. He is an enthusiastic member of the Michigan State Medical Society.

Among other features of the Scientific Exhibit in connection with the Detroit Session of the American Medical Association will be outlined the etiologic and pathologic factors in regard to rheumatism with a view to prevention and treatment. It is expected that personal demonstrations on various topics on chronic arthritis will be held during convention week by the following: C. C. Bass, M. D., New Orleans; Russell Cecil, M. D., New York; A. A. Fletcher, M. D., Toronto; Russell L. Haden, M. D., Kansas City, Mo.; James A. O'Reilly, M. D., St. Louis; Robert B. Osgood, M. D., Boston; Ralph Pemberton, M. D., Philadelphia.

Dr. Angus McLean left Detroit on January 25th for DelMonte, California where he attended the Pacific Coast Surgical Association as a Delegate from the Detroit Academy of Surgery. Dr. McLean delivered an address on "Medical Economics" at the Los Angeles County Medical Society on February 20th. While in the West Dr. McLean was tendered a dinner by Dr. W. T. Cole and Dr. George Tape. The guests numbered about thirty including the President and Ex-President of the California State Medical Society and the President of the Pacific Coast Surgical Society and the Los Angeles County Medical Society. Dr. McLean writes that there is much interest shown among the profession of the far west on the cancer question. Dr. Coffey of San Francisco has been using a serum or extract from the cortical substance of the adrenals.

AMERICAN MEDICAL ASSOCIATION DETROIT SESSION

The Committee on Scientific Exhibits of the Board of Trustees of the American Medical Association has authorized the appointment of a committee to undertake a special exhibit dealing with the treatment of varicose veins. The following have been appointed as members of the Committee: Geza de Takats, M. D., chairman, Chicago; Claude F. Dixon, M. D., Rochester, Minn.; Howard M. Kern, M. D., Baltimore. In addition there has been appointed an Advisory Committee con-

sisting of: George E. Brown, M. D., Rochester, Minn.; John Homans, M. D., Boston; R. D. McClure, M. D., Detroit; Walter E. Sistrunk, M. D., Dallas, Texas; H. H. Trout, M. D., Roanoke, Va. The plans of the committee are said to present in the form of charts the indications and contraindications of injection treatment and surgical treatment of varicose veins; the type of solutions used, the possible errors of technic, untoward symptoms during and after treatment, the dangers and the end-results. In addition, demonstrations of technic are planned on patients and microscopic sections of injected veins will be available for study.

IMPORTANT NOTICE

To officers and members of the Medical Societies, County, District and special organizations of Michigan,

ATTENTION

It is desired by the Committee to publish honor rolls of physician-participants in the Spanish-American and World Wars, in Vol. II of the forthcoming Medical History.

As to the Spanish-American a record has been received, but data in the hands of the Committee indicate that this is incomplete. Further information may be difficult to obtain, but diligent inquiry will doubtless bring much to light.

As to the Mexican border defense and the immediately succeeding World War whether there was service overseas, in training camps or elsewhere, a practically accurate record should be available, but for this the Committee is hopelessly dependent upon Society officers and members. Their co-operation is urgently requested to the end that desired recognition may be made.

Please furnish lists as soon as possible giving name, rank, residence, duration and place of service. Address Dr. C. B. Burr, The Durant Hotel, Flint, Michigan.

FRESH PATHOLOGY EXHIBIT

A special exhibit in fresh pathology will be one of the interesting features of the Detroit session of the American Medical Association. The exhibit will be in charge of the following local committee. Doctors A. L. Amolsch, assistant professor of pathology, Detroit College of Medicine and Surgery, Detroit; O. A. Brines, pathologist, Public Welfare Commission, City of Detroit; Joseph Casper, pathologist, Herman Keifer Hospital, Detroit; J. E. Davis, director of pathology department, Detroit College of Medicine and Surgery, Detroit; P. L. Morse, pathologist, Harper Hospital, Detroit; Clarence I. Owen, director of laboratories, Grace Hospital, Detroit; Max Pinner, pathologist, William H. Maybury Sanatorium, Northville, Mich.; and C. V. Weller, professor of pathology, University of Michigan Medical School, Ann Arbor, Mich. Dr. Frank W. Hartman, pathologist and director of laboratories, Henry Ford Hospital, Detroit, is chairman of this committee.

Surgical and necropsy material will be procured both from Detroit and Ann Arbor. A number of demonstrations will be made by members of the committee also in co-operation with the following pathologists from outside Detroit: Dr. E. R. LeCount, Chicago, Pathology of the Brain; Dr. William Ophuls, San Francisco, Pathology of

the Kidney; Dr. A. S. Warthin, Ann Arbor, Mich., Pathology of Syphilis of the Heart and Aorta; Dr. Milton Winternitz, New Haven, Conn., Pathology of the Lungs and Blood Vessels; Dr. Francis Carter Wood, New York, Pathology of Cancer.

Monroe County Medical Society held its regular monthly meeting at the Park Hotel, Monroe, January 16. After dinner and routine business, the society was entertained by moving picture films of the action of the gastrointestinal tract before and after the administration of certain drugs. These films were presented through the courtesy of the Petrolagar Laboratories. They were highly instructive and greatly appreciated by the members.

The Beaumont lectures were delivered by Dr. T. Wingate Todd of the Western Reserve University, Cleveland, Ohio. This annual event held in Detroit at the headquarters of the Wayne County Medical Society drew a very large attendance, the hall being filled to capacity. Many physicians from outside Wayne County were present.

THE NEW MERCY HOSPITAL OF MONROE

Monroe, one of the oldest cities in Michigan, now boasts of one of the most modern hospitals in the state. Built by public subscription and furnished by the Sisters of St. Joseph, who manage it, this fifty-bed hospital comprises the most modern and best equipment known to the hospital world.

The exterior of the brick structure is characterized by simplicity of design. The interior is tastefully furnished and decorated. The building has four stories. The lower three are devoted to the care of the sick. The fourth is being used by the nuns and nurses as living quarters. In the west center of the fourth floor is the chapel with the sacristy adjoining.

There are two operating rooms and emergency room on the north end of the second floor. They are equipped with the latest Balfour tables and Operay lighting fixtures. The walls and floors of the operating rooms are of gray tile, a comfort to the eye. The labor and delivery rooms are situated on the north end of the third floor. These are also equipped in the most modern manner.

The laboratory and X-ray and physio-therapy department occupy the north half of the basement. They are excellently equipped with flexible units. A diagnostic machine, a vertical and horizontal fluoroscope; a plate changer for chest work, and a portable unit comprise the X-ray equipment. In the physio-therapy department there are air and water-cooled ultra-violet fixtures, an infra-red, and a diathermy machine. The laboratory is completely fitted.

Mercy hospital is situated on north Macomb street, Monroe, just inside the city limits. The eight acres of land constituting the hospital grounds afford ample room for expansion.

Dedication exercises were held Sunday, November seventeenth, and patients were admitted the eighteenth. The staff is composed of all the ethical physicians and surgeons of Monroe county. There is a full time physician in charge of the X-ray, physio-therapy, and laboratory departments.

COMMUNICATIONS

Dear Dr. Warnshuis:

We sincerely appreciate your very kind letter of January 25 advising us of the action of the Council of the Michigan State Medical Society in expressing appreciation for the use of the facilities of the American Medical Association for the meeting of the Council and the Conference of County Secretaries.

We really feel that the thanks are due to go the other way. We sincerely appreciate the interest of the officers of the Michigan State Medical Society in the American Medical Association and are grateful indeed to the secretaries of its component county medical societies for honoring us with their visit. We hope that we shall have the pleasure of having them again whenever it suits their convenience.

Very sincerely yours,

OLIN WEST

Dear Dr. Warnshuis:—

Owing to the contact you have with the physicians of Michigan through your connection with the State Medical Society, I thought it possible that you might have knowledge of some one who desires a locum tenens during the coming summer months. I would like very much to obtain such a position, preferably in southern Michigan.

At the present time I have a Residence in Pediatrics at the University of Michigan Hospital. I graduated from the University of Michigan School in 1928 and took one year of rotating internship in the University Hospital before entering my present service. I have an appointment with Dr. Marriott at the St. Louis Children's Hospital beginning November 1st, 1930. This leaves me four months, July 1st to November 1st, which I would like to use to the greatest possible advantage. I will certainly appreciate any assistance you can give me in regard to this matter.

Yours very truly,

Dorman E. Lichty, M. D.,

THE DEPARTMENT OF POST-GRADUATE MEDICINE OF THE UNIVERSITY OF MICHIGAN IN AFFILIATION WITH THE MICHIGAN STATE MEDICAL SOCIETY

Presents the preliminary announcement of the second Post-Graduate Program, Detroit, Michigan, beginning June 2, 1930—Three-week intensive courses—Internal Medicine, General Surgery.

The program will be conducted in the following Detroit Hospitals—Receiving, Harper, Grace, Herman Kiefer, St. Mary's and Children's.

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Ann Arbor, Michigan

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courses of longer periods in Serology. Courses in general medical laboratory methods, including courses for Technicians. (Under the direction of Dr. R. L. Kahn, Director of University Hospital Medical Laboratories).

ROENTGENOLOGY

Six courses are offered. With the exception of Course 1, only those with previous X-ray experience will be admitted.

Course 1—4 weeks. The study of normal X-ray anatomy.

Course 2—8 weeks. Acute and chronic bone and joint pathology.

Course 3—8 weeks. Acute and chronic pulmonary and cardiac conditions.

Course 4—8 weeks. The gastro-intestinal tract.

Course 5—8 weeks. Superficial and high voltage therapy.

Course 6—4 weeks. Ultra-violet radiation and diathermy.

(Under the direction of Dr. P. M. Hickey, Director of Roentgenological Laboratories).

PEDIATRICS

Five-day intensive courses will be given the first week of each month, beginning October, 1930. (Under the direction of Dr. D. Murray Cowie, Department of Pediatrics and Infectious Diseases.)

A more detailed description of the above courses will be published later in this Journal, but a tentative program may be obtained at this time, which will give advance information to those who wish to plan their summer's post-graduate work now. Address the Director of Post-Graduate Medicine, University Hospital, Ann Arbor, Michigan.

DEATHS

MRS. HIRSCHMAN

Mrs. Lula Carstens Hirschman, wife of Dr. Louis J. Hirschman, immediate past President of the Michigan State Medical Society, died on February 3rd, at her home at 861 Edgemont Park, Grosse Pointe. The cause of death was agranulocytosis. Mrs. Hirschman had been confined to her bed somewhat more than a week, although her illness began five or six weeks ago. Mrs. Hirschman was a daughter of the late Dr. J. H. Carstens who in his life-time was one of the most prominent physicians of the state of Michigan. Mrs. Hirschman besides her husband leaves three daughters, Miss Ruth C. and Miss Alice C. of Grosse Pointe, and Mrs. Joseph L. Eagen of Bridgeport, Conn., a brother, Dr. Henry R. Carstens, and a sister Miss Mildred V. of Detroit. The funeral services were held at the home on the afternoon of February 4th. The Rev. Dr. Lee S. McCollester, Universalist Minister formerly of Detroit officiated.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

Frederick C. Warnshuis, M. D.
Secretary Michigan State Medical Society

Our Medical History

Following three years of diligent editorial research and writing by our Committee on Medical History, headed by Dr. C. B. Burr of Flint, our History is ready for the press. It is expected that the first volume will be ready for distribution in April. Dr. Burr has in his own inimitable language and way compiled a most intensely interesting history of our Society and the profession in Michigan. It is written in very fascinating style. It includes the earliest days and records and in our opinion excells any published history of any state. It is not a dry biography of men and events. It is a scholarly, literary composition.

Every member will want a copy for his library. Your order is solicited now in order that we may determine how many copies to print.

The second volume will appear during the early summer. Each volume will contain about 800 pages well illustrated. The price is \$10.00 for the two volumes. Five dollars to be sent with the order and the balance when notified that the second volume is ready for delivery.

Please send in your order today.

ORDER BLANK

F. C. WARNSHUIS, Secretary,
1508 Grand Rapids National Bank Bldg.,
Grand Rapids, Michigan.

I hereby subscribe for the two volumes on *The Medical History of Michigan* and agree to pay the price of \$10.00 for the two volumes. I enclose \$5.00 and agree to remit the balance when advised that the second volume is ready for delivery.

Signed

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City

NOTE: FIVE DOLLARS MUST ACCOMPANY THIS ORDER

COUNCIL MEETING AND COUNTY SECRETARIES' ANNUAL CONFERENCE

This issue contains the minutes of these sessions. Informative facts regarding your State Society is imparted. It is greatly desired that every member become enlightened as to the scope of our organizational activity.

OUR MEDICAL HISTORY

The notice and subscription blank in the last issue caused the receipt of a fair number of subscribers. The subscriptions received are in no way sufficient. This History should be in the library of every doctor. It is a medical classic. In pleasing literary style it sets up the history of medicine in Michigan. It is quite certain that once seen, you will want a set. However, it is essential that we know how many sets to order printed, hence the request that you *send in your subscriptions now*. There will be no second edition or surplus copies. Order your set on the blank contained in this issue.

MEMBER OR FELLOW

In view of the approaching meeting of the American Medical Association in Detroit, the week of June 22nd, we tender again a differentiation between a "Member" and a "Fellow" of the A. M. A.

Membership in your County Society and in your State Society makes you a *member* of the A. M. A.

To become a "Fellow" you *must file a Fellowship application*, countersigned by your State Secretary. This application is to be sent to the Secretary of the A. M. A., accompanied with your check for seven dollars (\$7.00), the yearly Fellowship dues. You then become a Fellow of the A. M. A. and receive the "Journal of the A. M. A." without additional cost.

There are several hundred of our members who *subscribe* to the Journal of the A. M. A. and pay the yearly subscription price of seven dollars. They *are not Fellows of the A. M. A.* They could become Fellows if they would fill out an application blank and they would thus receive the Journal. If you are a subscriber and have paid your 1930 subscription, all you need to do is fill out a Fellowship application.

At the Detroit A. M. A. session, *only Fellows can register*. The only way you can secure a badge is to register. Unless you register *you cannot attend any ses-*

sions, you will not be admitted to the scientific or commercial exhibits. All entrances are guarded to exhibits.

We are anxious to have our members profit by this session, still we do not want you to go to Detroit and then find you cannot register. Hence the warning—*file your Fellowship application now*. Blanks may be secured from County Secretaries or from the State Secretary.

MINUTES OF THE EXECUTIVE COMMITTEE MEETING, FEBRUARY 6, 1930

The Executive Committee of the Council of the Michigan State Medical Society met in Grand Rapids at 6:00 o'clock, February 6, 1930. The following were present:

R. C. Stone, Chairman; Geo. L. Le Fevre, Henry Cook, B. R. Corbus, J. D. Brook, President; F. C. Warnshuis, Secretary.

1. The Secretary presented contract for publishing the Journal by the J. R. Bruce Publishing Company. This was gone over in detail and upon motion of Le Fevre-Corbus, the contract was approved, and the Secretary directed to execute same in the name of the Society.

2. The Secretary presented a communication from the Lenawee County Medical Society, together with letter that had been written in reply. Upon motion of Corbus-Le Fevre, the Secretary's communication was approved as expressing the attitude of the State Society.

3. The Secretary set forth the need of making new arrangements for the preservation of the files and important correspondence, records of organizational activity and individual achievements, and presented a well advised filing system. Upon motion of Le Fevre-Cook, the plans were approved and the Secretary authorized to purchase this filing system at an expenditure not to exceed \$1,000.00.

4. Two representatives of the Ingham County Medical Society appeared before the Executive Committee setting forth some of their organizational problems in that district, and requesting advice. After a full and thorough discussion the chairman of the Council's Committee on County Society Activity was directed to impart the position of the Executive Committee for their guidance and information.

5. The Secretary reported the progress that was being made in the matter of publication of the Medical History of Michigan, and the printing details that had been

arranged with the publishers. Upon motion of Cook-Le Fevre, the details were approved by the Executive Committee, as contained in the correspondence presented, and the Secretary directed to continue in his supervision to expedite the distribution of this history.

6. Upon motion of Le Fevre-Cook, the Secretary was authorized to pay the bill of Dr. C. B. Burr, account of history editorship in the amount of \$683.25.

7. The Secretary reported upon the arrangements that have been perfected for the entertainment of the Officers and House of Delegates of the American Medical Association. He was directed to limit the attendance to 225 guests and to provide transportation for the Officers, the Board of Trustees and the Ex-Vice Presidents of the American Medical Association from the hotel to the Yacht Club.

8. The Secretary presented the problem of investment of the surplus funds of the Society, and upon motion of Corbus-Cook, the Chairman of the Finance Committee and the Secretary were empowered to exercise their judgment in the purchase of securities.

9. The Secretary presented a communication from the Board of Trustees of the Wayne County Medical Society relative to a 1930 appropriation. Reviewing the correspondence of previous years in connection with the appropriation of funds that have been made to the Wayne County Medical Society, upon motion of Corbus-Le Fevre, the Secretary was directed to advise the Trustees of the Wayne County Medical Society of the terms and conditions upon which previous contributions had been made and to draw attention to the resolution that was adopted at the time the last contribution was sent to the Wayne County Medical Society, and to advise them that the experiment had now terminated; that the State Society could not, in view of the financial obligations of the Society, make any contribution for this present year.

10. Upon motion of Corbus-Cook, the Secretary was directed to order six de luxe sets of the Medical History of Michigan.

11. Upon motion of Le Fevre-Corbus, Dr. Cook was designated to attend the Conference on Medical Education and Legislation that is to be held in Chicago the week of February 17th as the representative of the Michigan State Medical Society and that his expenses be defrayed.

12. The Secretary announced to the Executive Committee the death of Mrs.

Hirschman, and upon motion of Le Fevre-Corbus, the Secretary was directed to convey to Dr. Hirschman the sympathy of our Society.

13. In compliance with the motion adopted at the Mid-Winter session of the Council, Chairman Stone announced the appointment of the following committee to investigate and report upon an Endowment Insurance plan for our members. The committee is:

Dr. George L. Fe Fevre, Chairman; Dr. T. W. Heavenrich, Dr. W. J. Stapleton, Dr. Richard McKean, Dr. C. W. Brainard.

There being no further business, the Executive Committee adjourned at 11:15 p. m.

F. C. Warnshuis, Secretary.

LEGAL STATUS OF HOSPITAL RECORDS

The Neurological Institute asked the opinion of the Academy on the status of hospital records. A series of questions were formulated by the Neurological Institute and in view of its wider experience the questions were forwarded to the American Medical Association.

The questions and the answers of the Bureau of Legal Medicine and Legislation of the American Medical Association are as follows:*

1. How much of the clinical record on ward patients is subject to subpoena by the courts?

Answer—I know of no basis for drawing a distinction between the right of the courts to subpoena the clinical records of ward patients and the right of the courts to subpoena clinical records of private patients. The record of either class may be subpoenaed so far as such records are material and pertinent to the issues before the court. Probably this is true with respect even to records covered by the statutes forbidding the introduction of privileged communications in evidence, even though such records could not be admitted in evidence after they had been produced in court in response to the subpoena. In any event, it would be unwise for an officer of a hospital served with a subpoena commanding him to produce the records in any case to decline to respond to that subpoena and to produce the records, unless he was willing to assume the burden of determining whether such records were or were not admissible and contesting the issue, if he should be adjudged in contempt, by habeas corpus proceedings and appeals to the higher courts. The proper course, in such a case, it seems to me, would be to produce the records and leave the judge to determine whether they are or are not admissible.

2. Are any of the records contained in the chart of the patient considered as given in confidence, and is such confidence protected by the courts?

Answer—It may be stated as a general rule that where the information recorded on a chart represents a privileged communication between the physician and the patient, within the meaning of the statute governing privileged communications in the jurisdiction where the question arises, and if the patient has not expressly or by im-

*Published with permission of the American Medical Association.

plication waived his privilege of secrecy, the record will to that extent be regarded as privileged.

3. Are the records of private patients considered to be the property of the private physician taking care of them in the hospital, or are the records considered to be the property of the hospital?

Answer—So far as I know, no court has passed on the ownership of the clinical records of hospital patients, either of private patients or of any other class. The matter of ownership might be governed by express agreement in any particular case, provided the agreement was entered into before the patient entered the hospital. In the absence of an express agreement it is presumably governed by the rules of the hospital; a patient entering a hospital and a physician undertaking to treat a patient in a hospital may be presumed to agree to abide by such rules when they enter the hospital premises. In the absence of an express agreement and of hospital rules, the courts would probably follow the established universal or near-universal custom with respect to the matter. That custom would, it seems to me, constitute the hospital as owner of such records as trustees for the benefit of the patient. I am by no means sure that the attending physician has any right in the records after he has discontinued attendance on the patient, unless there is some express agreement giving him that right.

4. What parts of these records are considered to be given in confidence and therefore not subject to legal review or to be used in evidence?

Answer—just what is intended by the phrase "legal review or to be used in evidence," is not clear. The extent to which the recorded data are protected from disclosure in court depends on the law governing privileged communications in the jurisdiction where an effort is being made to compel such disclosure.

This, of course, is a question somewhat different from the use of hospital records in evidence, a matter that involves questions of hearsay, authentication, etc., that can hardly be discussed satisfactorily within the compass of a letter.

5. Are X-ray films taken of private patients considered to be a part of the hospital record, or are they the property of the private patients?

Answer—Roentgenograms of hospital patients taken in the course of diagnosis and treatment in the hospital are, in my judgment, a part of the hospital records, and I can see no reason for regarding them in any other way, although I know of no court decision of any court of appellate jurisdiction bearing on this point. With respect to the ownership of such records, whether taken in a hospital or elsewhere, your attention is invited to an article in the Journal of the American Medical Association, June 18, 1927, 88: 1985-1986.—From Bulletin, N. Y. Academy of Medicine.

PILOT EXAMINATIONS

Whereas, The Aeronautics Branch, Department of Commerce, has organized a medical service for the physical examinations of civil pilots and prospective pilots, in the interests of safety; and

Whereas, The physical standards adopted are in keeping with those adopted universally, and have reduced aircraft accidents from physical causes to a minimum; and

Whereas, The department has required these examinations to be made only by designated physicians in the interest of uniformity and control and in accordance with the custom adopted for the Army and Navy and in other countries; and

Whereas, The selection of examining physicians by the department has been based on training as flight surgeons or its equivalent, or on group examinations by specialists, a high standard of examination has resulted; and

Whereas, The department requires that all examiners hold the degree of Doctor of Medicine, be licensed to practice medicine under the laws of their respective states, and further requires that the appointees be recognized as ethical practitioners in their respective localities, thereby supporting the high standards advocated by this Association, be it

RESOLVED, That the American Medical Association at its stated assembly in 1929 endorses the medical work of the Department of Commerce, its methods of physical examination and its method of selection of medical examiners, and urges that the same high standards be continued and offers the support of the American Medical Association in furthering the specialty of aviation medicine; and be it further

RESOLVED, That a copy of this resolution be sent to the President of the United States, the Secretary of Commerce, and the Secretary of each state medical society.

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Minutes of the Mid-Winter Session of the Council of the Michigan State Medical Society, January 22, 1930

1. The Council of the Michigan State Medical Society convened in the Board of Trustees' room of the American Medical Association, Chicago, Illinois, at 10:30 A. M., January 22, 1930. The meeting was called to order by Chairman Stone with the following Councilors and Officers present:

R. C. Stone, Chairman, B. R. Corbus, J. Hamilton Charters, B. F. Green, C. E. Boys, Henry Cook, T. F. Heavenrich, Julius Powers, O. L. Ricker, Paul R. Urnston, Geo. L. Le Fevre, Richard Burke, B. H. Van Leuven, J. D. Bruce; J. D. Brook, President; J. H. Dempster, Editor; John R. Rogers, Treasurer; F. C. Warnshuis, Secretary.

2. Dr. Olin West, Secretary of the American Medical Association was present, and with a few remarks welcomed the Councilors to the American Medical Association and tendered the facilities of the headquarters to the Council.

3. On motion of Drs. Le Fevre—Bruce, the minutes of the Executive Committee were adopted and made part of the Minutes of the Council.

4. The report of the Medico-Legal Committee was transmitted by Dr. F. B. Tibbals, Chairman, as follows:

Detroit, Mich., Jan. 16, 1930.

Council,
Michigan State Medical Society.
Gentlemen:

The year just passed makes the twentieth successive year of the work of the Medico-Legal Committee, under the guidance of the same Chairman.

This extended experience seems to justify certain definite conclusions. There has been no appreciable increase in the number of malpractice suits and threats. Allowing for the gradual increase in membership, the percentage of malpractice claims maintains a general annual average of just about 1%. Certain factors, particularly the compensation act, might be expected to have increased malpractice suits because the "hungry lawyer" who is prevented from suit against the employer, very frequently picks on the attending

physician. Since therefore, there has been no increase in the number of threats and suits, it seems fair to assume that the work of this Committee in prophylaxis, has been of considerable value.

We have endeavored, at times through the State Journal, and again by talks before the County Medical Society, to educate the medical men as to the cause and prevention of malpractice suits. We have been able to disseminate a reasonable feeling of individual responsibility for a malpractice suit in any community, and a fairly uniform standing behind the man in trouble by the other local members of his profession.

It is also well known that no member of the State Society stands alone in his fight to protect his reputation and his purse. In many instances, he has an insurance policy which both defends and indemnifies. If he has no insurance, the State Society carries his defense through all Michigan courts, hence it is more difficult than formerly to secure a settlement before trial. I believe in the fighting defense as a most efficient prophylactic. Occasionally, of course, the case should be settled, if there has been negligence, or what will appear to the jury to have been negligence.

There has developed a State wide unwillingness to testify against a brother doctor, which is in marked contrast to the conditions prevailing fifteen or twenty years ago. While purchasable medical witnesses can usually be found, they generally now come from outside the state.

A total of about five hundred and fifty cases have been reported to this Committee and the number resulting in final adverse verdicts is surprisingly small. Nevertheless, the trend toward large verdicts in all types of litigation, occasionally hits the doctor, and the man who wants to play safe should double the indemnity of his insurance. During the past year there has been one verdict against a Michigan doctor, of \$20,000.00 which, however, is not yet final.

A total of thirty-three cases were reported during 1929, some of which have

been tried, others of which may be tried during 1930. The above mentioned verdict and one small settlement, comprise the casualties.

Our financial condition is very satisfactory.

Respectfully submitted.

Yours very truly,

F. B. Tibbal, Chairman.

1929 CASES

1. A young girl was thrown from a horse by a broken girth, receiving fracture and dislocation of right elbow. Suit against the doctor who owned the horse, claiming improper reduction and fracture.

2. Fracture at middle third of humerus, reduced under fluoroscope, but could not be retained in perfect apposition. Good results for function but some angulation.

3. Threat only.

4. Suit for \$70.00, claiming negligence in not curing urethritis in three treatments.

5. Patient with sharp flu, severe cough and marked bronchial rales. Also had symptoms of appendicitis. Doctor postponed operation until recovery from flu, then another doctor took the patient to an out of town hospital and operated, finding a walled off appendiceal abscess. Threat only.

6. Suit based on non consent.

7. Threat only.

8. Suit. Doctor saw six year old child in early morning. Unable because of child's fright, to make an examination, but in the afternoon sent the child to the hospital where operation disclosed a septic peritonitis.

9. Threat, alleging malpractice for loss of eye.

10. Suit against doctor, alleged cause of action arising while he was in France with the A. E. F. and never saw the patient.

11. Civil suit for seduction. Continued sexual intercourse and pregnancy. Defense because involving a criminal act.

12. Threat for fractured forearm.

13. Threat only.

14. Suit for return of fees.

15, 16. Threat against two doctors, claiming improper treatment of fracture.

17. Arm of babe crushed in clothes wringer. Much lacerations of soft parts. X-ray showed flattening of head of radius with no separation and no fracture line. A good functional result with slight interference with flexion. Dissatisfaction on part of parents.

18. Suit for \$100,000.00. Details not yet received.

19. Not civil malpractice.

20. Operation on osteomyelitis with history of several previous operations. Wound unhealed six months later. Attempt to collect balance of fees stirred up a suit for \$20,000.00. The doctor is well protected by X-rays and consultation.

21. A paracentesis of both ears in a child, done in March. Seen again six weeks later with an ear specialist who reincised the left ear. X-rays then taken were negative for mastoid disease. Tonsilectomy later performed by another physician. Impairment of hearing claimed.

22. Tonsilectomy on an adult, using 1% Butyn. Dyspnea and restlessness at once which soon disappeared. Right tonsil then removed by snare, then convulsions soon appeared, continuing until death one half hour later. Apparently an idiosyncrasy.

23. Suing for services, is threatened with counter suit. A case of prostatitis where diathermy was used. Claimed that damage resulted therefrom.

24. Pernicious vomiting of pregnancy. After thirty days, patient aborted, then developed a myelitis. Ultimate recovery. Doctor sued for fees and obtained judgment for most of it. Case appealed and suit for malpractice also started.

25. Threat, claiming improper reduction of fracture of the radius three inches above the wrist which was reduced under fluoroscope, but was difficult to retain in position.

26. Suit for return of fees, claiming fraud and duress.

27. Woman seen with defective vision in both eyes and one tear duct closed, which was dilated and injected with 10% solution of Argyrol. claimed that some months later, a black eye developed.

28. Abdominal hysterectomy. Normal convalescence. Left hospital in two weeks. Two weeks later, irritable bladder developed. Another doctor treated her for a month, no negligence apparent.

29. A lady, aged 76, fell from a step-ladder. No X-rays taken; family says doctor refused, claiming damaged ligaments but no fracture. Patient in bed two months with leg partially immobilized. X-rays later showed fracture of femur with partial absorption of bone at the point of fracture.

30. In summer of 1929, a patient who gave assumed name and address, was treated for urethritis with many gonococci present. He was later given two or three injections of citrate of iron. He now asks return of fees because of a reaction following the iron injection, claiming great swelling, pain and partial paralysis.

31, 32. Suit covering two doctors, alleging blindness following tonsilectomy.

33. Suit started at the close of December, details not yet received.

5. The Editor, J. H. Dempster, submitted the following report:

EDITOR'S REPORT

To the Publication Committee and Council of the Michigan State Medical Society.

Gentlemen:

In making my annual report I wish to say first that the 28th volume of the Journal of the Michigan State Medical Society

for 1929 is the largest in its history, 908 pages to be exact. This of itself does not necessarily constitute a merit; it does indicate, however, that the profession is showing rather marked activity when it comes to recording professional experiences.

There are several features which we have adopted and the continuance of which I would advise. In the first place the so-called "fillers" have been selected so as to be not only authoritative but of timely interest. The main source has been the abstracts of articles furnished by the American Medical Association and the scientific summaries furnished by Science Service, Washington. I have endeavored to edit and eliminate any features or phraseology in the Science Service material that would seem perfectly obvious to medical readers since the Science Service is intended for cultured readers in all professions and walks of life. These selections are as a rule summaries of papers of a medical interest or near-medical interest that are read at various scientific meetings held throughout the United States and Canada, as well as reports of the results of research. In regard to the material, contributions and otherwise which is being published in the Journal, I have interpreted the policy of the Council, that the object should be to print what is of the greatest interest to the greatest number of our members. In other words the Journal is not in any sense a specialist periodical. How successfully I have been able to put this into practice is for you to judge.

The introductory foot notes giving professional details as to the contributors of papers appears to meet with approval so far as I can make out.

A section has been added during the year entitled The Truth About Medicines. The copy is furnished by the Council on Pharmacy of the American Medical Association. It is edited each month so as to conform to the space available.

The general news features have been emphasized and the fact that this department is read justifies the printing each month what might be considered more in the light of professional gossip.

In the editorial department special efforts have been made to deal conservatively with what might be called the social

aspects of medicine. Your editor believes that a too-radical stand on most subjects is apt to defeat rather than to advance the purpose one might have in view. On the whole the great idea of preventive medicine has been advocated as well as the necessity of keeping one's mental equipment up to date by attending post-graduate clinics and conferences as well as keeping abreast of the times and acquaintance with the periodic and other literature of the profession.

There have been several complaints from persons discussing papers read at the annual meetings of the Michigan State Medical Society to the effect that they had been misquoted. To submit the typewritten discussions to each person interested would entail a large amount of correspondence with its consequent delay in getting the Journal out on time. There are several remedies, one would be for each person who discusses a paper to write out immediately his own discussion at the time and hand it to the stenographer.

The bulk of the copy for the Journal is in the hands of the printer a month before publication. It would be a great advantage if by special effort it could be printed during the first week so that the pages might be made up before the 20th of the month, thus giving me an opportunity to revise page proofs twice or three times if need be. The matter of proof-reading is one in which the entire responsibility rests with the editor. He cannot relegate this responsibility to anyone else. Since this is the case, to give his every opportunity for a "proof perfect" Journal more time should be had for the revising of the page proofs. My relations, however, with the printers have been very satisfactory. Their work is of a high degree of merit.

I desire in conclusion to express my gratitude to the Council and Publication Committee for their support and substantial recognition of my services during the past year.

All of which is respectfully submitted.

J. H. Dempster.

6. The Treasurer, John R. Rogers, submitted the following report of our bonded auditors which will be found in the Annual Report of the Secretary.

7. The Secretary submitted the following as his Annual Report:

Secretary's Annual Report

To the Council, Michigan State
Medical Society,
Gentlemen:

It is an honor to be able to submit this
1929 Annual Report to you and through
the Council to our members.
The following is our financial report:

January 14, 1930.

To the Council of the Michigan State
Medical Society,
Dr. F. C. Warnhuis, Secretary,
Grand Rapids, Michigan.
Gentlemen:

We have examined the accounts of the Mich-
igan State Medical Society for the year ended
December 27, 1929.

In addition to an examination of the accounts
pertaining to the assets and liabilities of the So-
ciety at December 27, 1929, we made a test check
of the recorded cash transactions and operating
accounts for the year ended at that date. We
did not make a detailed examination of all the
cash transactions and operating accounts for the
year, but the records examined were found to be
in order.

The balance sheet included herein, in our
opinion, shows the financial condition of the So-
ciety at December 27, 1929, on the basis herein-
after outlined.

The changes effected in the financial condition
of the Society during the year 1929 are reflected
in the following comparison of its assets and
liabilities at December 27, 1929, and December
26, 1928:

ASSETS			
	December 27, 1929	December 26, 1928	Increase Decrease*
Cash	\$ 2,740.64	\$ 852.63	\$1,888.01
Accounts Receivable.....	1,226.14	839.65	386.49
Securities	40,540.55	40,540.55	
Unclipped Bond Coupons.....	25.00	225.00	200.00*
	\$44,532.33	\$42,457.83	\$2,074.50
LIABILITIES			
Notes Payable.....\$		\$ 1,750.00	\$1,750.00*
Joint Committee	1,486.23	1,220.85	265.38
Prepaid Memberships	1,030.00	814.50	215.50
Advances Made for Reprints	167.88		167.88
Reserve for Legal Defense...	19,428.22	15,618.71	3,809.51
Net Worth	22,420.00	23,053.77	633.77*
	\$44,532.33	\$42,457.83	\$2,074.50

The following summary compares the ageing of
the advertisers' accounts at December 27, 1929,
and December 26, 1928:

	December 27, 1929		December 26, 1928	
Date of Charge	Amount	Per Cent of Total	Amount	Per Cent of Total
December	\$ 600.00	55%	\$ 665.24	65%
November	62.75	6	45.50	4
October	44.75	4	21.50	2
July, August and Sep- tember	220.25	20	58.75	6
Six Months Ended June 30th	50.50	5	45.50	4
Prior to January 1st	116.25	10	203.15	19
Total	\$1,094.50	100%	\$1,039.65	100%

The amount shown as due from the Couzen's
Foundation represents expenditures for a pediatric

clinic for which the Society will be reimbursed.

We have included in this report a statement of
income and expenses of the Society for the period
under audit. Tests were made of the recorded in-
come received by the Society and all increases
and decreases in expenses as compared with the
previous year were investigatd.

Cash on deposit at December 27, 1929, was
verified by direct correspondence with the deposi-
tary bank and the balance reported was reconciled
to the amount shown in the balance sheet. We
traced the recorded cash receipts for four months
of the year under audit with the deposits shown
by the bank statements on hand in the Society's
files. Cash disbursements for the same periods
were found to be supported by canceled checks
and other data on file.

Accounts receivable were proved by trial bal-
ance of the open accounts at December 27, 1929.
We did not correspond with the recorded debtors
or make any further verification of these ac-
counts.

Securities were verified by inspection. A
schedule setting forth the par, cost and market
values of these securities is included elsewhere
in this report.

As far as we could ascertain, provision has been
made for all known liabilities of the Society at
December 27, 1929. The amount shown as due
to the Joint Committee represents funds of that
committee which have been turned over to the
Society by the Committee's Treasurer, Dr. Warns-
huis, for convenience in handling its transactions.
Included in and made a part of this report is a
summary of the recorded transactions of this fund
for the year under audit.

The items contributing to the net increase dur-
ing the period of \$3,809.51 in the Medico Legal
Defense Fund are shown in an accompanying
schedule. The transactions within this fund have
been in accordance with the by-laws of the So-
ciety and the balance shown is fully covered by
assets on hand.

Surety bonds in the amounts of \$25,000.00 and
\$10,000.00 are in force covering Dr. John R.
Rogers, Treasurer, and Dr. F. C. Warnshuis, re-
spectively.

Very truly yours,
ERNST & ERNST,
Certified Public Accountants.

(SEAL)

BALANCE SHEET
MICHIGAN STATE MEDICAL SOCIETY

December 27, 1929

ASSETS	
Cash:	
On Deposit	\$ 740.64
Certificates of Deposit.....	2,000.00
	\$ 2,740.64
Accounts Receivable:	
Advertisers' Accounts.....	\$1,094.50
Less Allowance for Doubt- ful	250.00
	\$ 844.50
Couzen's Foundation.....	381.64
	\$ 1,226.14
Bonds—At Cost:	
(Market Value \$38,175.00).....	40,540.55
Unclipped Bond Coupons.....	25.00
	\$44,532.33

LIABILITIES	
Accounts Payable:	
Joint Committee.....	\$ 1,486.23
Prepaid Memberships.....	1,030.00
Advances Made for Reprints.....	167.88
	\$ 2,684.11
Reserve	
For Legal Defense.....	19,428.22
Net Worth:	
Balance—December 26, 1928.....	\$23,053.77
Loss for the Fiscal Year Ended	
December 27, 1929.....	633.77
	22,420.00
	\$44,532.33

This balance sheet is subject to the comments contained in our "Letter" included in and made a part of this report.

INCOME AND EXPENSE			
MICHIGAN STATE MEDICAL SOCIETY			
Period from December 27, 1928, to December 27, 1929			
	For the Period Ended		
	December 27, 1929	December 26, 1928	Increase Decrease*
Membership Dues.....	\$18,583.25	\$18,256.58	\$ 326.67
Journal Subscriptions.....	8,611.25	8,458.36	152.89
Advertising.....	8,197.33	8,474.13	276.80*
Reprint Sales.....	2,155.91	1,611.50	544.41
Interest on Investments.....	1,635.01	1,376.39	258.62
Post Graduate Fee from University of Michigan.....	1,500.00		1,500.00
Reduction in Allowance for Doubtful Accounts.....		100.00	100.00*
Profit on Sale of Securities.....		290.00	290.00*
Total Income.....	\$40,682.75	\$38,566.96	\$2,115.79

EXPENSES			
Secretary's Salary.....	\$ 5,492.00	\$ 5,000.00	\$ 492.00
Stenographer's Salary.....	2,640.00	2,755.00	115.00*
Society Expense.....	4,668.27	6,229.10	1,560.83*
Office Rent and Telephone.....	1,200.00	1,200.00	
Postage and Printing.....	340.00	426.50	86.50*
Editor's Salary.....	2,829.00	2,291.63	537.37
Journal Expense.....	12,821.65	12,811.61	10.04
Editor's Expense.....	645.40		645.40
Bad Debts Charged Off and Provided for.....	78.00		78.00
Reprint Expense.....	1,917.67	1,644.86	272.81
Council Expense.....	707.89	1,117.48	409.59*
Delegates to American Medical Association.....	1,308.34	417.65	890.69
Legislative Committee.....	2,011.98	265.79	1,746.19
Post Graduate Medical Conferences.....	3,273.84	3,213.94	59.90
Annual Meeting.....	1,382.48	909.83	472.65
Interest Paid on Notes.....		8.75	8.75*
Total Expenses.....	\$41,316.52	\$38,292.14	\$3,024.38
Net Income or Loss.....	\$ 633.77*	\$ 274.82	\$ 908.59*

SUMMARY OF RECEIPTS AND DISBURSEMENTS, JOINT COMMITTEE	
MICHIGAN STATE MEDICAL SOCIETY	
Period from December 27, 1928, to December 27, 1929	
Balance Due Joint Committee—	
December 26, 1928.....	\$1,220.85

BONDS OWNED
MICHIGAN STATE MEDICAL SOCIETY
December 27, 1929

	Interest Rate	Maturity	Par Value	Cost	Market Value
General Motors Acceptance Corp.....	5%	1931	\$2,000.00	\$1,956.80	\$1,930.00
Hudson Valley Coke & Products Co.....	7	1930	2,000.00	2,000.00	2,000.00
Peoples Light and Power Co.....	5½	1941	2,000.00	1,940.00	1,780.00
Grand Rapids Affiliated Corp.....	5	1955	7,000.00	7,000.00	6,790.00
National Gas and Electric Co.....	5½	1931	3,000.00	3,000.00	2,940.00
New York Central Railroad Co.....	4	1998	2,000.00	1,930.00	1,780.00
Michigan Fuel and Light Co.....	6	1950	3,000.00	2,985.00	2,700.00
United Light and Power Co.....	5½	1959	2,000.00	1,850.00	1,900.00
No. 50 Broadway Building Corp.....	6	1946	2,000.00	2,000.00	1,950.00
Pennsylvania Railroad Co.....	5	1964	3,000.00	3,093.75	3,105.00
National Electric Power Co.....	5	1978	5,000.00	4,725.00	3,900.00
Community Power Light Co.....	5	1957	2,000.00	1,940.00	1,760.00
American Telephone and Telegraph Co.....	5	1960	2,000.00	2,120.00	2,140.00
Palmer Building Corp.....	6	1935	2,000.00	2,000.00	2,000.00
Herald Square Building Corp.....	6	1948	2,000.00	2,000.00	1,500.00
	7	1930	2,000.00	2,000.00	2,000.00
Total.....			\$41,000.00	\$40,540.55	\$38,175.00

RECEIPTS	
Michigan State Nurses.....	\$ 100.00
Michigan Tuberculosis Association.....	300.00
Michigan State Medical Society.....	1,000.00
Grand Rapids Press.....	1,372.50
Detroit News.....	610.00
	\$3,382.50
DISBURSEMENTS	
Salaries.....	\$2,411.39
Alumni Press.....	289.00
Alumni Association.....	125.00
W. D. Henderson.....	191.73
W. S. Henderson—Prize.....	100.00
W. S. Henderson—Prize.....	100.00
	3,117.12
	265.38
Balance Due Joint Committee—December 27, 1929.....	\$1,486.23

SUMMARY OF CHANGES IN MEDICO LEGAL DEFENSE FUND RESERVE			
MICHIGAN STATE MEDICAL SOCIETY			
Period from December 27, 1928, to December 27, 1929			
BalanceDecember 26, 1928.....			\$15,617.71
ADDITIONS			
Dues.....	\$6,779.50		
Interest Received.....	724.55		
			\$7,504.05
DEDUCTIONS			
Legal Services.....	\$2,620.60		
Salaries.....	1,062.44		
Dues Returned.....	11.50	3,694.54	3,809.51
Balance—December 27, 1929.....			\$19,428.22

The foregoing certified statement of the audit of the finances of the Society is self-explanatory. Whereas an apparent loss of \$633.77 is shown, in reality there was no actual loss because of funds advanced for clinics and the publication of our Society's history. These advances will be reimbursed during this coming year. It should also be remembered that the past year has been a most active one and has entailed increased disbursements, including our legislative expenditures. The depreciation in value of our bonds is but a paper loss occasioned by the recent financial upheaval. Our bonds are all high grade and will return to par or above par value.

In view of the planned activities for this new year it is recommended that the

following appropriation of members' dues be made:

Defense Fund.....	\$1.50
Journal Subscription.....	2.50
Society Expense.....	6.00

The following budget is submitted for financial guidance during 1930:

BUDGET

Estimated Income:	
3,450 Members at \$10.00.....	\$34,500.00
Interest Earnings.....	1,200.00
Reimbursements About.....	1,000.00
Total Income.....	\$36,700.00
Estimated Expenditures:	
Medical Defense—3,450 Members @ \$1.50.....	\$ 5,175.00
Journal Subscriptions—3,450 @ \$2.50.....	8,625.00
Rent, Light, Telephone.....	1,200.00
Annual Meeting.....	1,000.00
Post Graduate Conferences.....	3,500.00
Legislative Committee.....	500.00
Printing and Postage.....	500.00
Council Expense.....	1,000.00
Joint Committee on Public Health Education.....	1,000.00
Delegates to American Medical Association.....	250.00
Stenographic Services.....	2,750.00
Secretary's Salary.....	6,500.00
Contingent for Society Expenses.....	5,200.00
Standing Committees' Expenses.....	500.00
Total Expenses.....	\$36,700.00

JOURNAL BUDGET

Estimated Income:	
Subscriptions.....	\$ 8,625.00
Advertising Sales.....	8,000.00
Total.....	\$16,625.00
Estimated Expenditures:	
Printing and Mailing.....	\$12,000.00
Wrappers.....	200.00
Editor's Salary and Stenographic.....	4,250.00
Contingent.....	175.00
Total.....	\$16,625.00

While no one can fortell what course our national finances will evidence, the indications are apparent of returning business prosperity. It may therefore be assumed that our business revenue will be of normal level and so justify the proposed budget.

Acknowledgment is gratefully made of the services rendered by our Treasurer, Dr. John R. Rogers. He yearly spends considerable time in the custodianship of our investment securities.

MEMBERSHIP

Our total paid membership in 1928 was 3,457. At the close of 1929 our records reveal 3,463 paid members, a gain of six members affiliated through the following County Societies:

County	1928	1929	Loss	Gain	Deaths
Alpena.....	16	16	.....	.....	.....
Antrim, Charlevoix, Emmet.....	15	14	1	.....	.....
Barry.....	12	12	.....	.....	.....
Bay.....	61	64	.....	3	1
Berrien.....	41	42	.....	1	.....
Branch.....	13	7	6	.....	.....
Calhoun.....	109	124	.....	15	1
Cass.....	8	8	.....	.....	.....
Chippewa-Mackinac.....	16	15	1	.....	.....
Clinton.....	18	18	.....	.....	.....
Delta.....	22	22	.....	.....	.....

County	1928	1929	Loss	Gain	Deaths
Dickinson-Iron.....	15	18	.....	3	1
Eaton.....	22	20	2	.....	.....
Genesee.....	132	136	.....	4	4
Gogebic.....	23	26	.....	3	.....
Gratiot-Isabella-Clare.....	31	20	2	.....	3
Hillsdale.....	22	20	2	.....	3
Houghton.....	42	42	.....	.....	.....
Huron.....	9	10	.....	1	.....
Ingham.....	92	95	.....	3	2
Ionia-Montcalm.....	38	36	2	.....	1
Jackson.....	66	76	.....	10	.....
Kalamazoo-VanBuren.....	118	116	2	.....	4
Kent.....	207	195	12	.....	3
Lapeer.....	20	16	4	.....	1
Lenawee.....	34	35	.....	1	.....
Livingston.....	14	15	.....	1	.....
Luce.....	10	10	.....	.....	.....
Macomb.....	33	38	.....	5	1
Manistee.....	10	12	.....	2	1
Marquette-Alger.....	38	38	.....	.....	.....
Mason.....	11	10	1	.....	.....
Mecosta.....	21	20	1	.....	1
Menominee.....	11	11	.....	.....	.....
Midland.....	7	7	.....	.....	.....
Monroe.....	33	34	.....	1	1
Muskegon.....	60	67	.....	7	.....
Newaygo.....	10	11	.....	1	.....
Oceana.....	8	8	.....	.....	.....
Oakland.....	107	108	.....	1	1
O. M. C. O. R. O.....	8	10	.....	2	1
Ontonagon.....	5	6	.....	1	.....
Ottawa.....	30	25	5	.....	.....
Saginaw.....	65	68	.....	3	1
Sanilac.....	12	6	6	.....	2
Schoolcraft.....	6	5	1	.....	1
Shiawassee.....	31	30	1	.....	2
St. Clair.....	50	48	2	.....	1
St. Joseph.....	17	15	2	.....	1
Tri.....	18	21	.....	3	1
Tuscola.....	24	25	.....	1	1
Washtenaw.....	120	120	.....	.....	1
Wayne.....	1,472	1,458	14	.....	19
	3,457	3,463	68	74	58
		3,457		68	
		6		6	

DEATHS

The following deaths were reported during the year:

Name	City	County
Stone, A. F.	Bay City	Bay
Haynes Geo. A.	Homer	Calhoun
Larson, C. T.	Crystal Falls	Dickinson-Iron
Bell, D. C.	Flint	Genesee
Conover, Thaddeus	Flint	Genesee
Moss, W. C.	Flint	Genesee
Rumer, James F.	Flint	Genesee
Munson, J. D.	Traverse City	Gr. Traverse-Leelanau
Atterbury, W. H.	Litchfield	Hillsdale
Barnes, James M.	Waldron	Hillsdale
Robson, Frank R.	Reading	Hillsdale
Gauss, C. G.	Lansing	Ingham
Holm, M. L.	Lansing	Ingham
Frailick, F. J.	Greenville	Ionia-Montcalm
Pepin, H. R.	Pullman	Kalamazoo
Shillito, Frederick	Kalamazoo	Kalamazoo
Smith, Malcolm	Allegan	Kalamazoo
Stark, Robert P.	Allegan	Kalamazoo
Frayling, Robert H.	Grand Rapids	Kent
Montgomery, Jas. R.	Grand Rapids	Kent
Thomas, Fred R.	Delton	Kent
Martin, Philip E.	Imlay City	Lapeer
Folsom, E. G.	Mt. Clemens	Macomb
Norconk, C. A.	Bear Lake	Manistee
Pease, Jerome F.	New York City	Mecosta
Landon, H. W.	Monroe	Monroe
Galbraith, S. E.	Pontiac	Oakland
Abbott, Frank E.	Sterling	O. M. C. O. R. O.
Rowe, Bert B.	Saginaw	Saginaw
Howard, S. A.	Applegate	Sanilac
Mitchell, Rachel Blair	Deckerville	Sanilac
Thompson, W. E.	Manistiquie	Schoolcraft
McCormick, Colin	Owosso	Shiawassee
Phippen, Samuel C.	Owosso	Shiawassee
Ney, George S.	Port Huron	St. Clair
Barninger, Chas. E.	Mendon	St. Joseph
Ralston, David R.	Cadillac	Tri
Bishop, H. A.	Millington	Tuscola
Mummery, Al. E. A.	Ann Arbor	Washtenaw
Baribault, L. C.	Detroit	Wayne
Berry, M. Beverly	Detroit	Wayne
Burge, Clayton W.	Detroit	Wayne
Caron, George G.	Detroit	Wayne
Chadwick, Florence	Detroit	Wayne
Drouillard, Philip P.	Detroit	Wayne
Forster, Richard	Detroit	Wayne
Foster, T. J.	Detroit	Wayne
Froude, Philip I.	Detroit	Wayne

Name	City	County
Kipp, A. W.	Detroit	Wayne
Lukas, Christine	Detroit	Wayne
Maguire, Fran. J. W.	Detroit	Wayne
Murray, L. A.	Detroit	Wayne
Sayers Clarence G.	Detroit	Wayne
Spranger, Michael J.	Detroit	Wayne
Van Hee, John	Detroit	Wayne
Vaughan, V. C.	Detroit	Wayne
White, Thomas W.	Detroit	Wayne
Zimmerman, Sam'l S.	Detroit	Wayne

It is but meet that we pause and pay tribute to those of our number who answered life's final summons. The heritage of their life and work is ours, the memory of each in his individual achievements and sphere affords us solace and inspiration. After their departure we carry on, grasp the torch they cast aside and assuming their labors we seek to uphold the sacred traditions of our profession. Thus do we revere their lives and enroll their names in our permanent archives.

THE JOURNAL

As the Editor has reported, The Journal in 1929 was the largest ever issued by the Society. It has been a pleasant duty to join the Editor in the labor involved in publication. The following itemizations are informative:

Total Number of Pages.....	908
Total Advertising Pages.....	420
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Total Pages.....	1,328
Advertising Receipts.....	\$ 8,197.33
Subscription Receipts.....	8,611.25
	<hr/>
	\$16,808.58
<hr/>	
Cost of Publication:	
Printing.....	\$12,821.65
Editor's Salary.....	2,829.00
Editor's Expenses.....	645.40
	<hr/>
	\$16,296.05
	<hr/>
	\$ 512.53

Average monthly circularization 3,650 copies. In the foregoing statement it will be apparent that no charge has been made against The Journal for the Secretary's and his stenographer's time in addressing, mailing, supervision of advertising and business management. Were these prorated a paper loss would be reflected.

We may well be proud of our official publication.

POST GRADUATE CONFERENCES

During the past year we have realized most satisfactorily upon the labor expended in the pioneer work of establishing our post-graduate conferences. These Conferences are now an outstanding Society Activity. During the year eight Conferences were conducted. In addition, the following centrally located special Conferences were held:

University Hospital — Couzens' Fund Pediatric Clinic.

One two-day General Conference in Detroit. In conjunction with the Post-Grad-

uate Department in Medicine of the University and the Detroit College of Medicine and Surgery a four-week intensive course in post-graduate work was provided in Detroit.

It is recommended that during the coming year but one Post-Graduate Conference be conducted in each Councilor District. It is further recommended that special state regional conferences be conducted in Ann Arbor, Flint, Grand Rapids and possibly Lansing. The final recommendation is that the intensive post-graduate courses be confined to Detroit and the University Hospital.

As an organization we have a tremendous responsibility in maintaining post-graduate opportunities within our state for the members of our profession. The public demands, and rightfully, the benefits of our advancing scientific knowledge. Individual members must be kept abreast and conversant with scientific advancement and competent to apply it. In the busy lives of our members there is but scant time remaining after they have performed the duties of each day's demands. It is for us to conserve their time and expenses by making it possible for them to continue their post-graduate education within the boundaries of our state. The opportunities that we provide must be of the highest grade covering the entire field of medicine. We have no other alternative, nor may we evidence any dereliction. To this scope of Society Activity we are beholden to devote a major part of our time and energy. The supervisory details are continually broadening in scope. They entail an immense amount of work with a large volume of correspondence and executive direction. Over half of your Secretary's time is devoted to this feature of Society Activity. I do desire to acknowledge the helpful assistance received from individual Councilors, County Officers and to Doctors Corbus and Bruce, who represent the Council in this work.

JOINT COMMITTEE ON PUBLIC HEALTH ADMINISTRATION

Closely following, if not equal in importance to our post-Graduate work, is the activity of the Joint Committee on Public Health Education. We stress, as indicative of the scope of the work, the following achievements in 1929:

Number of lectures Given to Parent-Teacher Associations and High Schools.....	576
Number of Doctors and Dentists Lecturing.....	151
Average Attendance at Parent-Teacher Lectures.....	170
Average Attendance at High School Lectures.....	278
Total Lay Attendance at Lectures.....	170,000

The truths of Scientific Medicine were imparted to 170,000 persons and the as-

sumption is fair that each attendant imparted what he or she heard and learned to one other person so that during the year at least 340,000 persons received dependable health information. In addition, the scope of work includes the health column and question-answers appearing daily in Detroit and Grand Rapids papers. The prize essay contest in schools aroused wide interest with many entrants.

Through the medium of the Joint Committee we are well serving the public and placing before them information for health guidance. It is recommended that County Societies sponsor a full series of these lectures in their County.

LEGISLATION

Our experience during the last session of the Legislature has been fully reported. The House of Delegates has recorded its action and instructions. Our future policy will be formulated by the present Legislative Committee and will be imparted in due course to our County Units.

COUNTY SOCIETIES

On the whole our County Units are functioning satisfactorily. Here and there a County Society is dormant due to the small number of members in the county or to disinterestedness of the elected officers. Through correspondence, The Journal, Post-Graduate Conferences, our Annual Meeting, Standing Committee Activity and the Annual County Secretaries' Conference, the endeavor is made to maintain a healthy state of County Society Activity.

As one reviews the work and looks forward to the future, certain objectives, for County Societies, arise which are of vital importance to their welfare. As a rule, every county society evidences commendable activity in its scientific work. That, however, is not the sole reason for its existence and should not be permitted to continue as the only society function. Conditions existent today and developing tomorrow render it imperative for County Societies to evidence a broader activity and influence in their community that deal with health, educational, economic, governmental and institutional interests. County Societies through their officers, board of directors and committees, should participate in these community movements. They should confer with and be well and influentially represented upon local boards and governing bodies. They should dominate and aid in guiding the policies of local hospitals. They should assume an important role in public school

work. Such activities are responsibilities no County Society can afford to shirk or hold aloof.

I am well aware of the proverbial excuse of "busy" and "no time." Such evasion is no longer acceptable or justified. Some of our County Societies are aggressive and manifest commendable interest in these newer obligations of organizational existence. Their members are as busy and even busier than the members in the units that neglect to interest themselves in community affairs. The palpable reason is an unwillingness to contribute the thought, the time and the effort. The situation is a serious one and has been well stressed by our National Secretary, Dr. Olin West. Our own House of Delegates has made a definite recommendation. Some of our standing committees are calling for such local activity. Your Secretary urges that the need for County Societies manifesting community interest be forcibly impressed upon our backward societies by the Councilors in whose districts they are located.

ANNUAL MEETING

The House of Delegates directed that our 1930 Annual Meeting be held in Benton Harbor providing that the Council finds that satisfactory local arrangements can be made. Your Executive Committee will submit a report hereon at this session.

SOCIETY'S ACTIVITIES

Our Society is actively engaged in the following endeavors and fields of work:

1. Joint Committee on Public Health Education.
2. Representation on and co-operation with the State Crippled Children's Bureau.
3. Executive Committee Conferences with the State Commissioner of Health.
4. Joint activity with the Department of Post-Graduate Medicine of the University.
5. Participating in the investigations of the National Committee on the Cost of Medical Cost.
6. Representation upon the White House Conference on Infant and Child Welfare.
7. Contact with Insurance Companies and formulating policies in regards to insurance reports.
8. Compilation and publication of our Society's history.
9. Annual Conference of County Secretaries.
10. Legislation Problems, State and National.

11. Annual Meeting.
12. The Journal.
13. Medical-legal Defense.
14. Bureau of Public Information.
15. Standing Committees on Health, Tuberculosis, Civic Relations, Legislation, Medical Education, History, Revision of Constitution and By-Laws.
16. Negotiations with State Bar Association relative to Expert Medical testimony.
17. Contact with the University Hospital relative to its free Clinical policy.
18. Investigations of illegal practitioners.
19. Endowment Foundation.
20. Aiding County Units to secure essayists.

Some of these activities have been commented upon, the remainder are merely tabulated. The accomplishments along all these avenues and other society work is fully reported from month to month in The Journal. They are being recapitulated in this report in order that a somewhat comprehensive vision may be acquired as to the extended and ever-expanding scope of our Society's field of work. We regret that there is so large a number of our members who do not actually visualize and realize the ways and means by which their State Society conserves and enhances their individual and collective interests nor the time and labor and money that is being continuously expended in their behalf. It may well be stated, and with commendable pride, that our State Society is conscientiously alert and deeply concerned with all the interests of its members. From time to time we receive a pressing insistence on the part of individuals or groups that our Society take pre-emptory action on a certain subject or condition. These requests emanate because of some recent experience that has been encountered. Too frequently the petitioners neglect to give mature consideration to their requests and fail to realize all the factors that are involved, or the experience that is possessed by those who have been intimately acquainted with organizational work over a long period of years. When no immediate action is recorded or the request is denied it is not uncommon for these petitioners to harshly criticize and condemn the Council, the House of Delegates or the Executive Officers of the Society. It is regrettable that such a course is pursued. What appears to be for the moment an all important condition, threatening the interests of some, will be found on the

morrow or with the passage of weeks to be of but trivial consequence, exercising no influence whatsoever upon our profession. We should ever remember that our traditions justify confidence. Our policies result from careful and mature deliberations on the part of Councilors, Committees, Officers and individuals possessed of facts, endowed with experience and judgment and intensively concerned with the interests of the whole society though not unmindful of the welfare of the individual. Further, full and careful consideration is given to not only the present and future, but also to the bearing and influence the question will exercise upon our commonwealth. If, therefore, dissatisfaction manifests itself let it be remembered that Councilors and Officers are your Officers and subject to the direction of the majority and cannot abrogate the instructions given them or betray the confidence reposed by the acts of the majority. It may be confidently reasserted that it is our constant, unselfish quest to cause our Society to maintain its organizational integrity unsullied and to enhance its prestige and honor as a factor in modern life. Your Secretary reaffirms his sincere purpose to so carry out the Councils instructions and duties.

A year of wonderful opportunity confronts us. May we all aid in attaining the greatest possible percentage of realization.

Your Secretary proffers his most sincere thanks and deep appreciation for many courtesies and kindness accorded during the past year by the Council, Officers and many members. Without such assistance I would have failed in the discharge of my duties. It has been a privilege to serve.

Respectfully submitted.

Signed:

F. C. WARNSHUIS,
Secretary.

ANNUAL MEETING—EXPENSE

June—		
	F. C. Warnshuis.....	\$ 43.15
	Blue Print Service Shop.....	5.00
		\$ 48.15
July—		
	Frank J. Mester.....	2.00
		\$ 2.00
September—		
	F. W. Hartman.....	100.00
	Paul D. Moore.....	25.00
	Don H. Duffie.....	25.00
	R. H. Stevens.....	25.00
	O. A. Brines.....	25.00
	Wm. M. German.....	46.80
	Am. Railway Express.....	3.53
	Julian Moore.....	25.00
	Jackson Elks Temple.....	500.00
	Boiden S. Veeder.....	47.69
	Wasserman's.....	65.60
	St. Louis Button Co.....	31.15
	A. P. Johnson Co.....	6.62

Milo Art Studio.....	414.00
Central Advertising Co.....	35.85
Jackson Elks Temple Co.....	1.50
St. Paul's Parish House.....	50.00
First M. E. Church.....	50.00
Wendall Westcott.....	10.00
Norma Bray.....	15.00
Evelyn Bueschler.....	15.00
Philip Riley.....	54.74
C. Hoffman.....	18.87
L. J. Hirschman.....	48.53
F. C. Warnshuis.....	40.30

\$1,680.18

\$1,730.33

October—

Am. Express Co.....	.65
Hayes Hotel.....	157.75
Golden & Boter.....	1.50
A. P. Johnson Co.....	131.81
John F. Barnhill.....	34.00
M. Edward Davis.....	16.50
Robert Sonnenschein.....	22.00
F. A. Willius.....	64.00
F. W. Schultz.....	70.00

\$ 498.21

November—

B. R. Corbus.....	30.00
Wm. Englebach.....	222.50
Descum C. McKenney.....	32.99
Masters Reporting Co.....	713.45

\$ 998.94

Credits—

Receipts from Rental of Booths.....	1,845.00
Total Expense.....	\$1,382.48

COUNCIL EXPENSE

January—

F. C. Warnshuis.....	\$ 48.00
R. A. Burke.....	52.00

\$ 100.00

February—

T. F. Heavenrich.....	76.00
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\$ 76.00

March—

B. R. Corbus.....	59.15
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\$ 59.15

April—

J. H. Powers.....	32.00
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\$ 32.00

July—

L. J. Hirschman.....	47.88
B. R. Corbus.....	17.30

\$ 65.18

September—

B. F. Green.....	51.75
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\$ 51.75

November—

B. R. Corbus.....	49.15
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\$ 49.15

December—

R. C. Stone.....	201.96
F. C. Warnshuis.....	72.70

\$ 274.66

Total \$ 707.89

DELEGATES TO AMERICAN MEDICAL ASSOCIATION

January—

L. J. Hirschman.....	\$ 50.00
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\$ 500.00

July—

Carl Moll.....	233.85
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\$ 233.85

August—

C. E. Boys.....	214.16
C. S. Gorsline.....	234.13
J. D. Brook.....	307.22
A. W. Hornbogen.....	268.98

\$1,024.49

Total \$1,308.34

JOINT COMMITTEE

Receipts

Balance from 1928.....	\$1,220.85
Michigan State Nurses Assn.....	100.00
Michigan Tuberculosis Assn.....	300.00
Michigan State Medical Society.....	1,000.00
Grand Rapids Press.....	1,372.50
Detroit News.....	610.00

\$4,603.35

Disbursements

Salaries and Expenses Paid.....	\$2,411.39
Alumni Press.....	289.00
Alumni Press.....	125.00
W. D. Henderson.....	191.73
W. D. Henderson—Prize.....	100.00

\$3,117.12

Balance Due from 1929 \$1,486.23

JOURNAL EXPENSES

January—

Postage.....	\$ 35.00
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\$ 35.00

February—

Taylor's.....	1.66
Johnson Co., A. P.....	1,047.30
Postage.....	30.00
Johnson Co., A. P.....	1,471.39
Addressograph Co.....	1.42
Science Service.....	24.00

\$ 2,575.77

March—

Addressograph Co.....	5.87
Johnson Co., A. P.....	1,194.03
Postage.....	35.00

\$ 1,234.90

April—

Copyright.....	2.00
Postage.....	30.00
Addressograph Co.....	3.28
Johnson Co., A. P.....	1,166.21

\$ 1,201.49

May—

Copyright.....	2.00
Postage.....	25.00
Addressograph Co.....	4.24
Johnson Co., A. P.....	893.49

\$ 924.73

June—

Copyright.....	2.00
Copyright—January, February, March.....	6.00
Postage.....	30.00
Addressograph Co.....	4.32
Johnson Co., A. P.....	1,083.17

\$ 1,125.49

July—

Copyright.....	2.00
Postage.....	25.00
Addressograph Co.....	2.18
Johnson Co., A. P.....	667.77
Johnson Co., A. P.....	23.73

\$ 720.68

August—

Copyright.....	2.00
Postage.....	25.00
Addressograph Co.....	2.29
Johnson Co.....	1,054.84

\$ 1,082.13

September—

Copyright.....	2.00
Postage.....	25.00
Addressograph Co.....	1.10
Johnson Co., A. P.....	841.14
Johnson Co., A. P.....	3.10

\$ 872.34

October—

Copyright.....	2.00
Addressograph Co.....	1.19
Johnson Co., A. P.....	862.24

\$ 865.43

November—

Copyright.....	2.00
Addressograph Co.....	2.58
Johnson Co., A. P.....	1,205.70

\$ 1,210.28

SEND IN YOUR ORDER FOR TWO VOLUMES OF MICHIGAN'S MEDICAL HISTORY.

December—		
Copyright	2.00	
Postage	35.00	
Postage	25.00	
Addressograph Co.	2.65	
Johnson Co., A. P.	1,060.43	
		\$ 1,125.08
		\$12,973.32
Credits—		
July—Cuts	83.09	
October—Cuts	59.92	
December—Cuts	8.66	
		\$ 151.67
Total Cost of Journal		\$12,821.65

LEGISLATIVE COMMITTEE

January—		
Postage	\$ 40.00	
		\$ 40.00
February—		
Johnson Co., A. P.	120.54	
Johnson Co., A. P.	11.76	
		\$ 132.30
March—		
Guy Kiefer	8.40	
C. F. McClintic	14.32	
J. B. Jackson	2.15	
Lansing Conference	42.40	
Guy Kiefer	10.00	
		\$ 77.27
April—		
W. H. Marshall	14.00	
Lansing Conference	51.85	
		\$ 65.85
May—		
L. J. Hirschman	11.00	
A. P. Johnson Co.	19.60	
Lansing Meeting	34.90	
Western Union	130.82	
Washington Expense	175.00	
Furn. Capitol Air Service ..	71.00	
		\$ 442.32
June—		
Committee Expenditures	1,006.75	
		\$ 1,006.75
July—		
L. J. Hirschman	99.49	
B. R. Corbus	6.00	
		\$ 105.49
September—		
Knappen, Uhl & Bryant	100.00	
J. Earl McIntyre	26.00	
		\$ 126.00
October—		
J. Earl McIntyre	16.00	
		\$ 16.00
Total Expenses		\$ 2,011.98

MEDICO-LEGAL DEFENSE—CASH ACCOUNT

	Debits	Credits
Balance from 1928		\$2,776.91
Jan. 2, Unclipped Coupons	\$ 30.00	
Jan. 2, Dues		144.00
Jan. 31, Dues		342.00
Feb. 28, Douglas, Barbour, Moll, ½ Fee ..	500.00	
Feb. 28, F. B. Tibbals, ½ Fee	500.00	
Feb. 28, F. B. Tibbals, Expense	6.75	
Feb. 28, Douglas, Barbour, Moll	114.00	
Feb. 28, Dues		1,848.00
Mar. 30, Certificate Deposit—Bought	3,000.00	
Mar. 30, Dues		1,988.00
Apr. 30, Dues Returned—Paid Twice	2.00	
Apr. 30, Dues		822.00
May 30, Dues Returned—Paid Twice	2.00	
May 30, Dues		931.50
May 30, Douglas, Barbour, Moll	25.00	
May 30, F. B. Tibbals—Expense	44.94	
June 30, Dues		237.00
June 30, Interest from Bonds		30.00
June 30, Interest from Bonds		325.00
June 30, Douglas, Barbour, Moll	342.80	
June 30, F. B. Tibbals	10.75	
June 30, Dues Returned—Paid Twice	2.00	
July 30, Dues		235.50

July 30, Intrest		62.50
July 30, F. B. Tibbals, ½ Fee	500.00	
July 30, Douglas, Barbour, Moll, ½ Fee	500.00	
July 30, Douglas, Barbour, Moll	442.40	
Aug. 30, Dues		82.50
Aug. 30, Interest		122.50
Sept. 30, Dues		26.50
Sept. 30, Dues Returned—Paid Twice	3.00	
Oct. 30, Dues		65.50
Oct. 30, Dues—Returned	2.50	
Nov. 30, Dues		74.00
Nov. 30, Interest		24.55
Nov. 30, Certificate of Deposit—Cashed		1,000.00
Dec. 27, Dues		189.00
Dec. 27, Interest		165.00
Dec. 27, Douglas, Barbour, Moll	696.40	
	\$6,724.54	\$11,491.96
		6,724.54

General Motors Coupon Not Clipped, Due December, 1929		\$ 4,767.42
		25.00
		\$ 4,792.42
Dues Paid in December—for 1930		206.00
Cash on Hand December 30, 1929		\$ 4,586.42
Bonds on Hand December 30, 1929		14,841.80
Total		\$19,428.22

POST GRADUATE CONFERENCES

March—		
F. C. Warnshuis	\$ 43.48	
		\$ \$ 43.48
April—		
Wayne County Society	1,200.00	
Campbell, A. M.	35.00	
Gordon, T. D.	25.00	
Jones, T. E.	23.40	
McKean, Richard	25.00	
Pollock, L. J.	28.51	
Johnson Co., A. P.	68.65	
		\$1,405.56
May—		
Johnson Co., A. P.	49.30	
		\$ 49.30
June—		
Postage	50.00	
Johnson Co., A. P.	42.90	
F. C. Warnshuis	97.90	
Johnson Co., A. P.	70.36	
		\$ 261.16
July—		
Duke, Wm. W.	76.10	
Master Reporting Co.	48.66	
Portmann, U. V.	20.00	
Polak, John O.	73.70	
Pollock, L. J.	32.12	
Royster, H. A.	88.92	
Scudder, Charles L.	85.00	
Smithies, Frank	48.62	
Hirschman, L. J.	17.50	
Corbus, Burton	25.00	
Camera Shop	30.00	
Abt, Isaac	31.12	
Bullawa, Jesse G.	77.20	
Corbus, B. C.	41.10	
Davis, Loyal	31.75	
Johnston, R. A.	17.00	
Lahey, Frank A.	91.84	
Marriott, McKim	44.52	
		\$ 880.15

August—		
Libman, E.	70.00	
		\$ 70.00
September—		
Addis, Thomas	75.00	
		\$ 75.00
November—		
Hodgen, John T.	29.28	
McKean, Richard	279.00	
Mustard, Russell L.	38.48	
Reye, H. A.	29.14	
O'Donnell, Wm. S.	279.00	
Sladek, E. F.	10.15	
Postage	60.50	
		\$ 725.55
December—		
Hess, Julius H.	176.09	
Bruce, James D.	17.25	
Camera Shop	15.00	
Camp, Carl D.	16.80	
Coller, F. A.	16.80	

8. The Secretary presented in detail the plans and arrangements that had been entered into with the Bruce Publishing Co. for the purpose of publishing the Medical History of Michigan as edited and compiled by Dr. C. B. Burr, submitting sample pages together with the cost, the funds that have been expended to date and plans for securing subscriptions and sale and distribution of the history. The details were discussed by several of the Councilors and upon motion of Drs. Corbus—Charters the plans were approved and the Secretary instructed to proceed with the publication making such arrangements and details as his judgment deemed most advisable.

9. Upon motion of Drs. Le Fevre—Ricker, the Secretary was instructed to handle all the finances connected with the publication of the History, and to receive the subscription price for the history set and to pay the expenses incurred upon statements rendered that have been approved by the Executive Committee.

11. The Secretary submitted the following communication from the Wayne County Medical Society, which was referred to the Council committee on County Societies:

Jan. 8, 1930.

F. C. Warnshuis, Secretary,
Michigan State Medical Society,
Grand Rapids, Michigan.

Dear Doctor Warnshuis:

Dr. Oscar S. Armstrong, an honor member of the Wayne County Medical Society since December, 1928, has made application to the Council of the Society for recommendation that he be made an honor member of the Michigan State Medical Society.

The Council, at its meeting of Monday, January 6, 1930, approved the request of Dr. Armstrong and wishes to recommend to the Michigan State Medical Society that he be made an honor member.

May we respectfully request that this matter be placed before the Council of your Society for proper consideration?

Very respectfully yours,

Wm. J. Burns,
Executive Sec'y.

12. The Secretary presented the following communication from the Berrien County Medical Society which was referred to the Council committee on County Societies:

Jan. 10, 1930.

Dr. Fred Warnshuis, Secretary
Michigan State Medical Society,
Grand Rapids, Michigan.

My Dear Doctor:

In reply to your letter of the 3rd concerning our facilities for holding the convention and answering each of your questions in detail.

In the first place I think that you are somewhat confused by Dr. Corbus's report because we showed him so many possibilities without picking out anything definite, feeling that to state just which place should be chosen, and what the arrangements should be were not our duty.

Let us be definite in stating that the Berrien County Society does not want to entertain the State meeting unless we can do it right in a comfortable and worthwhile manner for the visitors. We know that we have ample facilities and will endeavor to state them in detail. You will also receive a letter from the Chamber of Commerce supporting our statements.

We also wish to call to your attention a detail which we think has usually been neglected and overlooked by members of the council and officers who have their expenses paid, that there are a great many of the members of the State Society who do not feel that they can afford to attend the state meetings for two or three days paying high hotel and restaurant bills. There are a great many younger men and older men in the smaller communities as well as the cities who like to attend but cannot afford the best and whose pride keeps them at home when they should be there. That was the reason that we felt the Hotel Whitcomb in St. Joseph, which cannot be surpassed in its facilities was the proper place for the officers and House of Delegates who can afford the expense or else they would not seek the offices.

Reviewing the hotel situation again we call to your attention the Hotel Vincent in Benton Harbor with first class accommodations for 200, the Premier with 75 first class rooms in the new addition and 50 rooms in the older part which while of first class as far as sanitation and decoration are concerned still cannot compete with the Vincent and their own new addition and therefore have lower rates. The Hotel Dwan with 75 first class rooms is much better than the Otsego in Jackson. The Michigan Hotel with 50 first class rooms is a new hotel. In second class

hotels although at one time leaders in this part of the state are the old Hotel Benton and Eastland with 75 and 50 rooms respectively. This makes 400 first class rooms in Benton Harbor with 175 second class rooms as well.

In St. Joseph the Whitcomb have 250 first class rooms whose rates you know and which you will admit compares favorably with any others in the state. Besides the Hotel Dennis, a new hotel of 50 rooms first class, and the old Lake View with 75. There are 8 other hotels in the two towns which we have not mentioned because we think the larger and better hotels are sufficient and they have handled previous conventions which have registered all the way from 1000 to 2000 people with comfort. Such conventions as State Kiwanis, American Legion, Knights Templar, Veterans Foreign Wars, etc.

It was our contention that the Twin Cities could be joint hosts and there would be no scramble for decent rooms like there was at Jackson and Lansing for instance, but that the hotels of the two towns would provide ample accommodations.

The scientific sessions can all be held in Benton Harbor in either one of two buildings, Sonner Memorial Hall or the Armory, and the House of Delegates can also meet in Benton Harbor in the Hotel Vincent or either one of the above mentioned buildings, in other words everything can be held under one roof if desired.

Now as to the facilities of Sonner Hall which we showed Dr. Corbus.

There are rooms available for section meetings as well as two auditoriums. One auditorium (church with 750 seats) the other auditorium 50x100 with removable seats (500) which can be used for exhibits, also has a balcony and stage. The section rooms are as follows (7): Room 1 seats 250 (40x28) has that many seats in it. Room 2 on same floor has had 150 seats in it without crowding for recitals (26x33). Room 3 on floor above has the following: (42x26) approximately same size as Room 1 and will seat the same. Room 4 on this floor is 26x31 like room 2. Room 5 is long and narrow 43x18, a regular class room, and seats 75 to 100. Room 6 is 36x36 and will easily seat 150. Room 7 is a large basement room on the same floor as the auditorium and is 34x28 ordinarily used as a boy scout drill room.

An inspection of this layout will show it to be ideal. I note on your figures Obser-

vation and gynecology room should seat 200. I never miss any of this section and never saw over 75 there at one time in the last four years. If you remember also in Jackson with the huge building that the Elks had there was not room for the Nose, Throat, and Pediatric sections in the same building.

Now our other possibility is the Armory. This of course has an immense drill floor the largest in the state. The rooms available are all large but not decorated. Has 5 rooms for sections besides main floor for exhibits, as follows, 80x80, another 40x80, two more 40x20 and one 20x20, a lecture room with 60 seats.

The other possibility which we mentioned in our previous correspondence was the Y. M. C. A. which has available two large rooms which will seat 150 to 200 and one smaller room with a seating of 75. This of course would necessitate one or two sections meeting in the nearby Benton Harbor club around the corner, one-half block from the Y. The gymnasium floor (Y. M. C. A.) there would be available for exhibits.

The entire meeting could be held in the Hotel Whitcomb as they offered the lobby which can be closed off and one other large room for the medical and surgical sections and private dining rooms are available and plenty large enough for the other sections. However, this would leave no place for exhibits and I think this layout was what impressed Dr. Corbus.

In fact we have so many possibilities that you would have to see them all to decide which would prove the best.

We will plan to entertain the women visitors at bridge and luncheon. Country Club and Municipal golf courses are available. Free Steam boat ride on the lake, and luncheon clubs will provide private cars for transportation through the fruit belt on sightseeing tours or any place the visitors wish to go. All cars will be provided with special parking privilege cards, and local people will have invitation cards on their cars offering transportation to visitors.

Special luncheon and banquet facilities are available for any groups who wish them at reasonable rates. Free fruit in gift baskets.

All this is not idle talk. It has been done before and will be done for the doctors. What more to offer we are at loss to say.

Trusting this gives your information in detail and hoping that I may be available in Chicago for any further details, I am,

Sincerely,

W. C. Ellet, Sec'y.

Berrien County Medical Society.

13. The Secretary presented the following communication from the Wayne County Medical Society, which was referred to the Council Committee on County Societies:

December 3rd, 1929.

Michigan State Medical Society.

Greetings:

On behalf of Wayne County Medical Society, I hereby extend a cordial invitation to Michigan State Medical Society, to hold their next annual session in Detroit.

Very cordially,

A. S. Brunk, President.

14. The Secretary presented a communication from Dr. Tibbals, Chairman of the Medico-Legal Committee and also from Dr. Newitt relative to a suit for mal-practice. This was referred to the Committee on County Societies.

15. The Secretary reported upon tentative arrangements that have been made for the entertainment of the Officers and House of Delegates of the American Medical Association at the time of the 1930 Annual Meeting in Detroit. These were approved and the Secretary directed, upon motion of Doctors Green-Urmston, to perfect the arrangements and carry out the plans outlined.

16. The Secretary called attention to the fact that when the American Medical Association met in Detroit, that only Fellows of the Association could register and upon receiving their badge of registration, were the only ones who would be admitted to the sessions and to the scientific and commercial exhibits. He called attention to the fact that a goodly number of our members were not Fellows of the Association and that the possibility existed that many of them would come to Detroit to attend the Annual Session and would be disappointed when they found they could not gain admission to many of the sessions, exhibits, etc. Upon motion of Ricker-Powers, the Secretary was instructed to call the attention of the County Secretaries and our members to this fact and urge that they become Fellows of the American Medical Association and thereby be en-

abled to attend the session of the American Medical Association in Detroit.

17. The Secretary presented contracts for the publication of the Journal for the coming year from the A. P. Johnson Company and from the Bruce Publishing Company. These were referred to the Publication Committee.

18. The Council then went into recess for lunch and for the convening of the Council Committee to consider the matters referred to them.

19. The Council re-convened after the noon recess at 2:30 p. m.

20. Dr. George L. Le Fevre, Chairman of the Finance Committee, submitted the following report, which upon motion of Le Fevre-Ricker, was adopted:

REPORT OF COMMITTEE ON FINANCE

To the Council:

Your Committee on Finance has reviewed the auditors' report and concurs in its summarization.

Your Committee congratulates the Society upon its sound financial condition and for the thorough business methods it observes.

Satisfactory evidence exists to assure us that sound judgment has been exercised in investing our surplus funds.

Your Committee recommends that the Council approve the appropriation of our membership dues to the three general funds in the amounts recommended by the Secretary.

Your Committee recommends the adoption of the proposed budget.

G. L. Le Fevre, Chairman.

21. The Finance Committee further reported through its Chairman, recommending that the Chairman appoint a special committee of five members, three of whom were to be Councilors, to further investigate and report back to the Council upon the matter of Endowment Insurance for our Endowment Foundation. Upon motion of Le Fevre-Powers, the recommendation of the committee was adopted.

22. J. D. Bruce, Chairman of the Committee on Publication, submitted the following report, which, upon motion of Urmston-Chartes, was adopted.

REPORT OF COMMITTEE ON PUBLICATION

To the Council of the Michigan State Medical Society:

The completion of the Medical History

of Michigan and the prospect of early publication is a matter for congratulation. While your Committee on Publication looks forward to a more auspicious occasion when we may join with the entire Society in an appreciation to Dr. Burr and his fellow authors, we cannot let this opportunity pass without a reminder to the Council of the weeks and months of labor which this service has entailed. While Dr. Burr will assure us that it has been a labor of love, we wish him to know that our affection for him makes us proud and happy to be so deeply in his debt.

The steady progress of the Journal is very gratifying to this Committee. The careful selection of articles, which are so painstakingly edited, as well as the high quality of the editorial content, makes us look forward to the coming of the Journal. The editor has been concerned with the irregularity of publication. The Journal of the American Medical Association is on our desks so regularly every Saturday morning that if it were not to appear, the day would be more or less upset. The Committee is inclined to think that a regularly specified date for the mailing of the Journal of the Michigan State Medical Society would not only add to the interest of its appearance, but also be very gratifying to the editor.

James D. Bruce,
B. H. Van Leuven,
Julius H. Powers.

23. The Chairman of the Publication Committee further recommended that if satisfactory arrangements can be perfected, that the Secretary and the Editor enter into a contract with the Bruce Publishing Company for the publication of the Journal, but that before such a contract be executed the same be submitted for approval to the Executive Committee. This recommendation was carried upon motion of Boys-Powers.

24. Dr. B. R. Corbus, Chairman of the Committee on County Societies, submitted the following report, which upon motion of Le Fevre-Boys, was adopted:

To the Council of the Michigan State Medical Society:

The Committee on County Society activities find themselves this year, with little occasion to give you much of a report. The general activities of the Society have been fully covered by the Secretary's report, which you have heard. The report of the director of the post-graduate department

of the University of Michigan may be expected to cover our joint activities of the past year in regard to our post-graduate conferences and post-graduate activities. This report is attached herewith and it is fitting that it comes direct since Dr. Bruce has had general charge of these joint activities.

The Committee feels that during the coming year the number of post-graduate clinics might be decreased. We think we see a certain lessened interest. This lessened interest we have anticipated in our reports of previous years. Interest, we believe, will be sustained by great care in making out programs so that each program may be distinctly worth while, and by a distribution of the clinics so that the profession of each portion of the state may have the opportunity, but at such intervals as will tend to make the clinic a valued, and in consequence, a well attended affair.

We commend the effort of the Secretary to supply to individual counties a speaker or speakers on the request of that County Society, and we suggest that there is an excellent opportunity for near-lying counties to combine and, with the co-operation of the Secretary's office, to put on for themselves, the occasional important day or evening meeting. The County Societies, in doing this, must feel the responsibility and see to it that a respectable number of their members are in attendance.

We feel that the County Society should endeavor to take a more outstanding part as an organization in community affairs. Your attention has been called to this before. Education of the public in medical affairs, and with it a better appreciation of the medical profession, will only come as the county unit accepts its community responsibilities and makes a distinct effort to play its part in an active way in furthering those activities which are concerned with social betterment. More and more are we impressed with the fact that every effort that we can make to educate the public in medical matters will be to the advantage of ourselves as well as to them.

There is no group that functions so efficiently and is productive of so much as the Joint Committee on Public Health Education in which we, as originators of the plan, take a great deal of pride. We would like to call the attention of the Council to the fact that there is no provision made for a representative of the Council on this committee which is so closely allied with the State Society. As a State Society we

are the heaviest financial supporter of this movement, and since the Council is responsible for the disbursing of State Society funds, it would seem that we should have a representative on this committee. We suggest, therefore, that the proper steps be taken immediately to have a member of this Council appointed on the Joint Committee on Public Health Education.

SECRETARY'S ANNUAL REPORT

Post-Graduate Conferences—We disapprove the Secretary's recommendation insofar as it commits the committee to a definite program. The committee has already discussed this matter. We commend the Post-Graduate activities of the past year, particularly the four weeks' intensive course presented in Detroit.

Other features of the Secretary's report have already been discussed in our main report.

Annual Meeting—We recommended that the next Annual Meeting be held in Benton Harbor-St. Joseph and that the time of meeting be left for decision with the Executive Committee of the Council.

Medical Legal Report—We approve the report of the Medical Legal Committee and recommend its acceptance. Further, we approve the action of Dr. Tibbals in the Newitt case and recommend that Dr. Newitt be given such medical legal help as he would have been entitled to had his dues been paid.

Honorary Membership—The name of Dr. Oscar O. Armstrong of Wayne County having been approved for honorary membership by his County Society and approved by the Councilor of his District, the Council herewith approves and recommends him to the House of Delegates.

In respect to the Post-Graduate Conferences for which I have been directly responsible the past year, I would say that they have been quite uniformly successful both in point of interesting presentations and in attendance.

The Detroit Conference in June, while one of the best ever given in Michigan, was well attended the first day. Counter attractions in the evening and the College Commencement the second afternoon, together with certain other easily recognized factors, brought the attendance to a low point, particularly in the afternoon of the second day. I do not think this matter of sufficient importance to warrant further discussion at this time.

The second meeting in the Upper Peninsula was well attended and we were fortunate in the selection of the men on the program. I have had many evidences of appreciation of the program put on by Dr. R. R. Smith of Grand Rapids, Dr. Richard McKean and Dr. Wm. G. O'Donnell of Detroit.

The conference on tuberculosis put on at the Howell Sanitarium had a very good attendance and every one was very appreciative of the hospitality of Dr. Huntely, the superintendent, and were interested in the working of the institution and in the program. Dr. Pritchard of Battle Creek was kind enough to take part in the program and he never fails to interest.

Supported by the Couzens Children's Fund of Michigan, we had the outstanding conference of the year at the University Hospital, Ann Arbor, on November 26th. We were fortunate in securing Dr. Julius Hess of Chicago, who, with Dr. Cowie and his staff of the University Hospital, and Dr. Wile, put on a magnificent program to a capacity attendance. Dr. Kiefer of the State Board of Health presented in a splendid way "The Responsibilities of the Practising Physician in Preventive Medicine." The registration was over 200 and a considerable number failed to hand in their names.

An analysis of the communities represented was of interest. Doctors came from 71 towns, 11 of which are known to have specialists in Pediatrics, 55 are without specialists, and there are 6 of which we are uncertain. There were 64 in attendance from Detroit.

At Hurley Hospital, Flint, we gave our second demonstration under the Couzens Fund. Doctors Levy of Detroit, Young of the State Board of Health, and Penberthy and Davidson of Detroit, all did magnificently. The attendance, 125, while not as large as Ann Arbor, was satisfactory. Considering the state of the weather and the time of the year, I was surprised at such an excellent showing.

It is possible that we might consider another clinic in Detroit or Grand Rapids this winter, but my feeling is we had better defer further work along this line until spring.

During the month of June we gave four-week courses in Detroit in Medicine, Surgery and Surgical Anatomy. Forty practitioners were registered and continued through to the last hour of the courses. The program consisted of about 200 hours of

teaching and covered the most important phases of the subjects presented. The teaching staff was chosen from the profession of Detroit. The Receiving Hospital was the center of our activities, while tuberculosis and infectious diseases were given at the Herman Kiefer, and children's diseases and surgery of childhood at the Children's hospital. The course in Anatomy was given in the laboratories of the Detroit College of Medicine.

Our matriculants were unanimous in their praise of the work. I attended almost daily and the work was most satisfactorily done and encourages me greatly in attempting much more ambitious efforts along these lines. Our program for this summer is now in preparation and is even more attractive than that of last year. I am hoping to have an announcement available at an early date.

Respectfully submitted,

The Committee on County
Society Activities.

Burton R. Corbus, Chairman.

T. Heavenrich,

C. E. Boys.

25. Elections: In executive session the Council unanimously elected the following officers for the ensuing year:

Treasurer, John R. Rogers.

Editor, J. H. Dempster.

Secretary and Business Manager, F. C. Warnshuis.

26. Upon motion of Urmston-Burke, the Secretary was instructed to arrange a special booth in the registration hall at the time of the Annual Meeting of the American Medical Association in Detroit for the registration of Michigan members attending that session.

27. Upon motion of Heavenrich-Urmston, Gladwin County was attached to the Tenth District.

28. Councilor Burke commented upon the Post-Graduate Conferences in the Upper Peninsula and expressed appreciation for the manner in which they had been conducted and requested that this plan be continued during 1930.

29. There being no further business, the Council adjourned at 4:30 p. m.

F. C. Warnshuis, Secretary.

BERRIEN COUNTY NEWS NOTES

The Berrien County Medical Society held their first meeting of 1930 at the Hotel Whitcomb in St. Joseph on Wednesday evening, February 19th.

There were 35 at dinner and several others came in later for the business meeting and the paper following.

At the business meeting, plans were further outlined for the state meeting to be held in September. Suggested dates were for the second or third week as hotel accommodations would be best and fruit season at its height. Dr. McDermott announced the standing committees for 1930 as follows: Legislative, Herbert Kling, Abbe Henderson of Niles, and C. A. Mitchell of Benton Harbor. Executive, H. O. Westervelt, Benton Harbor, Warren Smith, Berrien Springs, and C. W. Merritt of St. Joseph. Membership, John Ames, Niles, F. J. Witt, St. Joseph, and R. B. Howard of Benton Harbor. Grievance or Censors, F. W. Brown, Watervliet, H. J. Burrell, Benton Harbor, and D. A. Van Noppen of Niles.

Dr. Warnshuis' letter regarding committees for the state meeting was read. These committees were tentatively named and plans made for meeting to work out details under the head of a general chairman.

The Women's Auxiliary also met in the lobby of the hotel under the leadership of Mrs. Henry Bartlett of St. Joseph, the President, and made plans for entertaining the wives of doctors attending the convention. It is their plan to provide plenty of entertainment so that women attending will not have to look to their husbands for company during the meeting.

Applications for membership were handed to the membership committee from Dr. Gordon Rice of Watervliet and Dr. Clayton Emery of St. Joseph.

The speaker of the evening was Dr. John Hodgen of Grand Rapids. His talk was on fractures, dealing mainly with the Colles type. His paper was accompanied by lantern slides showing the anatomical construction of the wrist articulation as well as X-ray pictures illustrating the before and after results of fractures.

The things emphasized particularly were the over extension to break up impactions and splinting in extreme flexion by means of anterior and posterior plaster splints.

There was a lengthy discussion of the talk deviating into points not brought out in the paper. The old discussion of "To plate or not to plate" types of splints, when to do the open operation, etc. The paper was excellently delivered and the discussion extremely interesting and worth while.

The next meeting will be held in Niles in March. Entertainment will be provided by the members from that town.

W. C. Ellet, Secretary.

Proceedings, Annual Conference, Secretaries of Component County Medical Societies of the Michigan State Medical Society

January 22-23, 1930, Hotel Drake and
American Medical Association, Chicago

The Annual Conference of the Council and County Secretaries of the Michigan State Medical Society convened at dinner in the Drake hotel in the City of Chicago, Illinois, at 6:30 p. m., Wednesday, January 22, 1930. Dr. F. C. Warnshuis presiding.

Chairman Warnshuis: I am going to present to you first Dr. R. C. Stone of Battle Creek, Chairman of our Council, who will speak to you on "The Purpose of the Conference." (Applause.)

Dr. R. C. Stone: Mr. Chairman, Fellows of the Michigan State Medical Society, and Guests: It is certainly a wonderful inspiration to the Council of your Michigan State Medical Society to see the response on the part of our County Secretaries in their attendance at this meeting. Apparently the effect of the inspiration which the Secretaries received who attended the meeting last year has gone out and spread among the rest of the Secretaries. We are very happy to have you here.

Our program is of a little different type than the program of last year's meeting. Last year, as you remember, the program was devoted almost entirely to the activities of the American Medical Association. We felt that in this meeting, by your getting together and talking over, as we hope you will, the many activities of our own State Society as well as the activities of the American Medical Association, you will go home with a renewed inspiration and with a renewed vigor to carry on your work even better in the coming year than you have in the past.

The officers of the American Medical Association who are present know, when they see you men, why we have the standing as a State Society throughout the country that we have. It is due to your efforts. We all recognize it and we appreciate it greatly.

We know that only through a continu-

ance of that same harmonious co-operation can the success which has been achieved by the Michigan State Medical Society go on.

The purpose of the meeting, of course, is to discuss the various activities of our State Society as well as those of your individual County Societies. In the round table discussion which will come out later, we want you to feel free to talk about your problems, your difficulties. We hope that in that discussion many of your problems will be overcome.

We are indeed very happy to have you all here. (Applause.)

Chairman Warnshuis: As Dr. Stone has said, it is the unselfish contribution of individual members of the profession in Michigan, located in its various counties, that has made for the advancement of organized medicine and has made what our Michigan State Medical Society is today in the State of Michigan and to some extent in the entire United States. The State Society owes a lot to those men who have given the contribution that you are giving here today and are giving in your official capacity throughout the year.

One of those who has been one of our most faithful workers for a period of better than eighteen years, has been honored and recognized for the contribution that he has made in that quiet, unassuming way that has contributed so largely to our success. He is now our President. Dr. J. D. Brook, of Grand Rapids and Grandville. (Applause.)

Dr. J. D. Brook: Mr. Chairman, Honored Officers of the American Medical Association, and Members of the State Society: I shall be very brief. We have some treats in store from Dr. Sundwall and Dr. Bruce and Dr. West. We have a very wonderful Secretary, Dr. Warnshuis. Not only is he a good Secretary, but he also has great executive ability, particularly when it comes to issuing orders. For instance,

the other day he said to me: "Brook, we've got you down for a few remarks at the Secretaries' Conference in Chicago."

You probably don't know that in the early years of Fred's existence he started out to be a preacher. Personally, I think he made a mess of that job, but he still has a habit of handing people texts upon which they shall speak. So I took the orders he gave me, and I want to say just a few words about the various words in this text. In the first place, we have the word "we." I don't know just what he means by "we," whether he means Stone and Corbus, the chairman and vice-chairman of the Council, or whether he means himself and his officers, or Dr. Warnshuis and Mrs. Warnshuis a la Lindbergh. I think, therefore, we have to interpret that "we" a little differently. You can't take all the sayings that come from the Bible in a literal sense, so I want to substitute for that word "we" the word "I."

He said, using the next few words of this subject, "We've got you down." I think that is a perfectly clear statement of fact. It doesn't need any explanation particularly. You know the president of the State Society used to have something to do before we had a Speaker of the House. At the present time the presidency is largely an honorary proposition, notwithstanding the published statement of the secretary to the contrary.

Then, further, he uses the word "remarks." That is a most convenient term to use for anybody when you want to assign a subject, because all it means is that you get up and show yourself, make some noise and sit down again.

So much for the text.

I thought today, while the Council was in session, that there were possibly two or three things that I might call to the attention of the Secretaries of the various County Societies. One of these was the fact that constantly physicians in the state are being caught violating the Harrison Narcotic Law. We have members of our Society at the present time serving time for this violation. I doubt very much that more than a few in this hall know what there is in the 1928 regulations of the Harrison Narcotic Law. What rights have you under the law in prescribing narcotics? How far can you go?

I am quite sure, in fact, I know, that if conditions are throughout the state as they are in my county, many doctors are daily violating that law.

There are two things which I would advise you never to do. One is to write a prescription for an opiate for an addict, except under one condition, and that is, if the addict is in charge of a responsible individual on his way to an institution for treatment. Under the law, that is the only condition under which you will be allowed to prescribe an opiate for an addict. The second thing under this narcotic law which I would advise you never to do is write a prescription for an individual who comes to you complaining of neuralgia, in whatever part of the body it may be, unless you know that individual and know that the complaint is right and proper. If he be a stranger, the chances are ten to one that he is planted and he is there to get you.

Dr. Warnshuis said to me the other day: "You know, it's kind of tough that almost every day I get a request from somebody who has been threatened with a malpractice suit."

I said, "It can't be so often as that, Fred. That would be over 300 a year."

"Well," he said, "that's true."

"I said, 'Do you mean to tell me that 10 per cent of our Society members are threatened with malpractice suit in the course of a year?'"

He said yes. That is an appalling condition. I don't know why that should be, but it appears to me that if that is true (and undoubtedly it is true) there is something radically wrong somewhere, and that radically wrong something is located with the doctor. I am sorry I have to make such a statement as that, but I can't help feeling that it is true.

I can cite you now two cases in my own county, both fracture cases; one has been sued, and the other probably will be sued. Neither one of them ever had an X-ray taken. On that basis I make the statement that something is radically wrong. That is one thing that I would like to have you take home to your County Societies.

The third thing I want to bring to you is the matter of our medical history. I have some personal pride in that medical history. You know, it is not always well for anybody to start something, and it is frequently a dangerous thing to do. Yet stimulated by the information I had from the example that Illinois had given us and the thought I had on it, I brought the matter before our House of Delegates, I think three years ago. At that time we passed a resolution to have appointed a medical history committee. That committee has

been functioning steadily. I was at one time a member of it, but because of the press of other duties I resigned, and I am a little bit sorry now that I did, but that is in the past.

We have brought to fruition this medical history, in part. One volume is now in the hands of the printers. It will be a two-volume affair, for sale at \$5 a copy, a very wonderful piece of work. I have to make that statement on the authority of Dr. Warnshuis, who has read some of it; I haven't. If you know who the editor of the book is, you can very well agree that it must be all right, that it must be good. The editor is C. B. Burr, of Flint.

What I want to bring to you about this medical history is this: We want that medical history in the hands of every member of the State Society. We want you Secretaries to take home a message to the doctors of your County Societies to place their orders with the Secretary for these two volumes of the medical history. We know that you will be well repaid and will be mighty happy that you have it.

Undoubtedly you have other problems in your County Societies which demand your attention from time to time. Probably some of these you can solve yourselves; on some you may need some help. If you do, all that I can say is that you push your pencil and write to your State Secretary if it is a state problem. I am sure that he is always willing and ready and anxious to help you in any way that he possibly can.

Our State Society, I think, is in existence not for one purpose alone, but one of the purposes of its existence is the fact that it wants to be helpful to the County Societies and through them to the doctors individually.

Sometimes we have problems which go even beyond our state. When you are confronted with those, you have but to do the same thing, except to address your communication to Dr. Olin West at 535 North Dearborn. There is there a store of information the equal of which does not exist anywhere on earth. I think I am perfectly safe in saying that. If there are medical problems which bother you and you want information on any medical subject at all, there is the place you can get it.

Dr. Olin West is one of these wholehearted, genial, wonderful fellows who is always willing to help any doctor at any time; it doesn't make any difference if you blow in there any time of the day or night,

if he is there he will work with you. Work means nothing to him. I think his middle name is Work. I should call him Olin Work West. He works night and day.

He told me over at Minneapolis a couple of years ago, "You know, Brook, we have to start about the first of January to prepare for our annual meeting." That statement kind of floored me, but it just goes to show how much there is to do in that office.

The Secretary of the American Medical Association is not elected by the Board of Trustees, the way the Secretary is elected by the Council in our State Society. The House of Delegates elects him. Each year, each member of the House of Delegates vies with the other for the honor of placing Dr. West's name in nomination. Of course, he is nominated, and he is always unanimously elected. He used to give us a little talk after he was elected. But in the last year or two he has kind of quit that; he just gets up and says, "I thank you." The House of Delegates is very, very quiet when he says it, for in those three words is embraced as much as anybody could ever put into a speech.

With these few remarks, I thank you for the privilege of having talked to you tonight. (Applause.)

Chairman Warnshuis: We have invited some of the bureau heads and directors of the Councils of the A. M. A. to be here as our guests this evening. We are not calling on them tonight to talk to you, because they are on the program tomorrow morning. We trust, as they have been distributed around the table, that you have had an opportunity to visit with them and have learned of some of the work that they are doing in their respective departments.

There is, however, one man who is not on the program for tomorrow. It has been one of my pleasures, through a number of years in my connection with the transactions that have taken place in the various sessions of the American Medical Association in Chicago, to have met him and been greeted in a cordial way and to have gotten some relief from the worries of our daily tasks just by being associated with him. He is placed in a responsible position in the American Medical Association, because he is the custodian of the funds. It is my pleasure to present to you Dr. Austin Hayden, Treasurer of the American Medical Association, and one of the best fellows you ever met. (Applause.)

Dr. Austin Hayden: Mr. Chairman, and Gentlemen: It is a great pleasure to me

to be here with you this evening. I didn't know that I was to be called upon to make a speech, and I couldn't do very well if I were called upon, because speech making is entirely out of my hands, it being left by me in the hands of my friend, Dr. Fishbein, across the table, on all official occasions, and he is the man who never fails under any circumstances in that respect.

I very much enjoyed talking, this evening, with one of your members and learning something about your hospitals in Michigan. I received the very unusual information from him that your state has hospitals in which no patient undergoes a major operation without having first a consultation of another member of the staff, together with the surgeon who is going to operate. I think that is extremely unusual. I was very much edified that such was the case.

I have just returned from one of the hospitals patronized by Michigan people, that lies entirely outside of your state, and I was recounting some of my impressions of that place to Dr. Corbus, who sat at my right this evening. I might also say that this same institution takes care of a great many of Chicago's sick. That is Rochester, Minnesota.

Dr. Fishbein whispered something across the table to me that, of course, does not concern you at all in your climate or your liquor transactions, but it struck me as being peculiarly apropos to the city of Rochester where it was 15 below zero yesterday morning. Morris said that the weather was so very cold that the bootleggers had to put alcohol into the stuff that they sold to keep it from freezing. (Laughter.)

Of course, I am very optimistic about the future of medical practice, notwithstanding the things that are said about the cost of medical service and the cost of hospitalization and all that sort of thing.

I was simply astounded at the way in which things have changed in Rochester in the last fifteen years, which was the last time that I visited that clinic. I was impressed with the tremendous system that pervades the practice of medicine in that locality. A considerable amount of discussion was engaged in at this end of the table as to whether or not that institution would survive, whether or not other institutions of a similar kind would spring up throughout the country. It is my belief, in the face of considerable opposition, that that thing will survive and that not only

will it survive, but that other institutions of a similar kind are going to make their appearance throughout the United States. I believe that there is a demand for that class of service. I think that we must organize to meet that demand. I think it is the answer to the question of state medicine; I think it is the answer to the question of better payment for medical service, better appreciation of those services by the general public.

I was impressed by the fact that in one of your cities in Michigan where there are but two hospitals serving a community of about 70,000 people, those two hospitals are officered by practically the same personnel, unorganized, perhaps, I think admittedly so, but still with a very splendid number of doctors in attendance on each of these institutions. It seems to me that it is up to us in Chicago, it is up to you in Michigan, to organize the brains that the medical profession has always had and I believe now have as they have never had before, in a way that will be a very salable product to the American people, and that will insure for the people throughout the length and breadth of this land a very much superior medical service to what they are getting now and will insure an income that is superior to the incomes, or rather the pittances, that are now enjoyed by the average physician who is practicing medicine.

I know that these remarks and these sentiments are rather an intrusion into the subject matter of this meeting, but I was really tremendously impressed by what I saw yesterday. I was up there to attend an ear, nose and throat meeting, and the one criticism that I felt as I looked through that tremendous institution was the fact that much as they have contributed to the science of medicine, they have contributed not one iota, as far as I can see, to the economics of medicine, which they have developed, I believe, to an unusual degree in that institution.

I think that the gathering of any number of county officials, of state officers of any medical society, especially in a city outside of your own state from which you come, as in this instance, out of the loyalty and the interest that you feel in the parent organization is a matter of great edification. I think that it says without any question that medicine in Michigan is in very good hands and that the outlook for our profession in your state is extremely bright. (Applause.)

Chairman Warnshuis: Three weeks ago

in New York with five addresses, the following week in California with about fifteen addresses, and tomorrow with five addresses in Omaha, Dr. Fishbein is carrying the gospel of medicine from coast to coast, and has kindly consented to cancel his train reservation this afternoon and take a midnight train, in order to be with us tonight. (Applause.)

Dr. Morris Fishbein: With that introduction I should start out with the statement, "Unaccustomed as I am to public speaking." (Laughter.) I always like to come to after-dinner meetings where so much is said in introduction of the various speakers. The wonderful remarks that have been used by the various speakers concerning each other and concerning everybody else that they could possibly see reminds me of an obituary party that was held one evening around a departed friend from the land of Ireland. It seemed that his job most of his life had been the manicuring of boulevards, something which had been practically discontinued in our city due to the fact that there is nothing where-with to pay the manicurists. A number of his friends stood about and began remarking upon his wonderful qualities, and one of them said: "Well, I can tell you this, when that boy got through you could eat off of any boulevard that he had worked on, it was just that clean."

The others continued in that vein, remarking about his wonderful qualities, and finally a little fellow over in the corner got up and said, "Well, don't you think he was a little weak around the lamp posts?" (Laughter.)

These compliments that have been tendered take me back to a meeting down in Oklahoma that I attended not long ago where a rather beautiful address had been made, and one man got up and said, "Gentlemen, this address marks an epoch in this society, and I want to move you, sir, that it be spread upon the minutes."

Another fellow got up and said, "I want to second that motion, but with this amendment, namely, that it be spread upon the lawn." (Laughter.) It reminds me of some gossip that I heard one time in a hotel where there were a couple of Jewish traveling men. One said to the other, "Did you hear about Abe Cohen making \$200,000 in the jewelry business in Cincinnati?"

The other fellow said, "Yes, I heard about it, but really the way it was, was this: It wasn't in Cincinnati at all, it was in Columbus, and it wasn't in the jewelry

business, it was in the clothing business, and it wasn't \$200,000, it was \$20,000, and besides that he didn't make it, he lost it." (Laughter.)

Much of the gossip that goes on in this way in the medical profession gets enchantment as it travels.

One of the reasons for this touring about that I have done is really to get some conception of American medicine at first hand in the various states in which it is practiced, and the more one does travel about this country and sees all the states and the nature of practice in a great many different communities, the more he becomes convinced that no self-organized committee, no commission, no board, no group of any kind can sit anywhere in this country and answer the question of medical practice for all those communities according to any given set of rules. The actual fact of the matter is that there are no two states in the Union for which the same system of practice will serve. The kind of practice that goes on in Minnesota will not necessarily do for Georgia; the kind of practice that goes on in Arizona and Nevada cannot be duplicated in California, and certain things are done in San Francisco which could not exist in Los Angeles, and thank God many things go on in Los Angeles that can't possibly go on anywhere else. (Laughter.)

That reminds me that I saw in Los Angeles more funny kinds of medicine practiced by more peculiar practitioners, including the practitioners within organized medicine, than I have ever seen anywhere else. I think we can all take a lesson as to what happens to the American public with chronic disease by seeing what Aimee McPherson is doing with some of them out there. When you see the remarkable stunts that she performs and in which she has the support of a tremendous number of people in that community, you become convinced very soon that a great deal of what goes on in America represents nothing permanent at all, but just a temporary phase. Our American people are very quickly given to taking up new things in medicine, new things in healing, new things in religion, new things in organization and business, and anybody who can promote his scheme strongly enough can get a big following for a brief interval. That lady has recently developed as one of her finest exploitations the building of a tremendous cemetery for her followers. She bought some 200 acres of ground and built herself a great mausoleum in the

center, and she is selling lots, and the closer you lie to Aimee the more it costs you. (Laughter.)

You can really get a conception of medicine and healing in this country only by traveling around and seeing these performances.

The remark made by our genial Treasurer relative to the impression that he received recently in Minnesota reminds you of two things that have happened: First, the farmer who came to the circus and went through the sideshow and saw the camel leopard, a two-humped camel, and said, "Hell, there ain't no such animal." That is exactly the same situation that confronts any visitor going for the first time to one of these tremendous organizations where some 5,000 or 6,000 patients are being handled under one series of roofs and under one administration.

When the great medical center was built and organized in New York, a guest from Germany, a great internist, was taken out, and as he looked at this thing he merely said, "Das ist unmöglich," (this thing is impossible,) it couldn't exist. I am convinced from my own first impression of that tremendous pile of buildings going on and on and upward and upward, with some ten thousands of people being housed under this one series of roofs entirely devoted to the problem of medical care, for one thing that if any patient ever gets a sight of the buildings before he gets out of the ambulance, his convalescence will be delayed three days; he simply cannot recover from the shock that he is going to have when he sees that tremendous structure all devoted to the care of the sick.

There are many problems in medicine today, and I think the chief problem is that of educating our public to the fact that scientific medicine is worth everything that they pay for it and that they have to pay for it if they want it. They can pay for everything else; they have mortgaged their futures for luxury; let them learn to mortgage their present for the illness which is inevitable. We know from our own figures that at least 2 per cent of the people in the United States are going to be seriously sick all the time. We know that 10 per cent of the people in the United States are going to be sick at some time during the year. Knowing that fact, we must educate the people of the United States to pay for illness exactly as they pay for their radio and their electric refrigerator and their jewelry and their cosmetics and their motor cars, which are the

things that they have bought during the past fifteen years to a greater extent than anything else. (Applause.)

Chairman Warnshuis: From the top-most rank of the American Medical Association to the individual doctor in the remotest hamlet, the problems of the profession are of profound importance today. The problems that confront them and their solution are occupying a considerable part of the time of those at the A. M. A. I do not know of anybody who is more competent to tell us just what some of those problems are and what we, as county organized units, should do in their solution than Dr. Olin West, the Secretary of the American Medical Association. (Applause.)

Dr. Olin West: Mr. Chairman, Ladies and Gentlemen: I had intended to offer some remarks of a complimentary nature to some of our fellows here tonight, but Dr. Fishbein has pursued a kill-joy policy in saying what he has said. I was even going to say something nice about Fishbein, but it seems apparent that he won't appreciate it, so I am going to leave it out, but I am going to swap compliments with Dr. Brook. He gave me far more credit than is due, but I am going to tell the truth about him and his splendid services as a representative of the Michigan State Medical Society in our House of Delegates. Dr. Brook has for years performed in a most efficient, unassuming and quiet sort of manner a very important duty preliminary to the organization of the House of Delegates, which is the policy-making body of the American Medical Association. He has been faithful to the last degree, and those of us who have observed his quiet, efficient work, have greatly appreciated the compliment that the Michigan State Medical Society has paid him and its recognition of his splendid service.

Before talking about county medical societies, I want to say a word that will make you understand that the American Medical Association is anxious, willing and even eager to serve every state medical association, every county medical society in the United States, and through them every individual member of our host of more than 98,000 members. For that purpose the association maintains a working personnel of approximately 500 persons. The Association has its various councils, bureaus and departments, every one of which is in charge of a loyal, interested force of men and women, all eager to serve you

and all working hard to that end. To them goes most of the credit for any service that may have been rendered to you and the other physicians of the United States in the name of the American Medical Association. I wish that I could make the entire medical profession of this country fully appreciate the scope and volume of the work that is done by those employees of the Association, of whom you rarely hear, who are working just as much in your interest and rendering just as faithful and as efficient service as any of those that you do hear of more frequently.

Dr. Warnshuis has thrown me a little off balance by intimating in his introduction that I am to discuss many of the great problems, some of which Dr. Fishbein talked about so well. I had in mind to talk to you about my conception of what the county medical society ought to do in its own bailiwick, so to speak, or at least to give you my idea of some of the things that I think it can do.

No part of any structure is more important than its foundation. The county medical society is the foundation of medical organization in the United States, and for that reason is the most important unit in the structure, the basic unit. The state medical association, the American Medical Association, can be no stronger than the component county medical societies which go to make them. Membership in the county medical society means membership in the state medical association; it means membership in the American Medical Association, which cannot be had except through membership in the county medical society, and it means membership in many other scientific organizations that are open only to the members of our county societies. It means, more than that, the determination of the possibility of other important connections by physicians. Those are facts that ought to be kept in the minds of every officer and every worker in the county medical society.

Because membership in the county medical society means so much and because the county medical society represents within its own jurisdiction the real medical profession, it is incumbent upon every county medical society to guard jealously its membership. There has arisen in the last few years a tendency, which in my humble judgment is a dangerous tendency, to get into membership every man that can possibly be had. My very sincere conviction, after rather considerable opportunity for observation, is that it is necessary today

as never before that quality shall be put before quantity and that each applicant for membership in any county medical society should be carefully scrutinized before he is admitted.

It would surprise you, perhaps, if you knew how often it happens that inquiries come to the American Medical Association about this, that and the other man who has already been taken into membership, has already qualified as a member of the county and the state medical association, whose record shows that he was absolutely ineligible from the beginning. There are a number of state societies that have adopted the plan of sending an inquiry to our offices concerning every applicant before he is admitted, and I am very proud of the fact that through that procedure we have been able to keep out of organized medicine some men who have absolutely no right to membership and whose membership would bring discredit, if not disgrace, upon the profession in its organized capacity.

I have told you before, and I say it wherever I go whenever I have an opportunity, that as I see it the primary purpose of medical organization is to promote the art and science of medicine and the betterment of public health. I am quoting there the section of the constitution of the American Medical Association which defines its purposes. If every county medical society does its full duty and exerts its fullest possible effort to making its every member a better physician, many of these things that Dr. Fishbein has told you about that he has seen in California and elsewhere cannot unduly affect the ultimate outcome with respect to the practice of medicine in the United States.

The greatest work that a county medical society can do is to contribute to the efficiency of its every member. This can be done in a good many ways: First, through the promotion of good scientific programs. Now a good scientific program does not necessarily mean that you shall have some outstanding scientific contribution delivered by some noted character in medicine. There are many ways to have good scientific programs without continually bringing in outstanding figures from far-off places. I know of a county medical society that has come to be very efficient through the process of having what its members call round table discussions at their monthly meetings. It is a very simple scheme that they have put into

operation. They select from the Journal of the American Medical Association or from their state journal, or from some other scientific medical periodical, two or three articles which every member in this small society is required to read before the time of the monthly meeting. None of them try to read a paper, but they give their entire time to the discussion of these articles which they have been required to read in the interim between meetings. If you were to go into the community that is served by the members of that society, you would find them well informed about the things with which they have to deal in the everyday practice of medicine. The required reading and their intimate discussions have stimulated wider reading and a determination to be well informed.

The program of the county medical society ought to deal most largely with those things that men meet in their everyday work. This thing of having some fellow come in and read an ultra-scientific paper about a tumor of some poorly understood section of the brain, of the nervous system, does not mean anything to the average man in medicine; it does not help the average man in medicine to talk about a thing that he will see once in a lifetime if he lives long enough; but it will help him if you will give him some information, or make it possible for him to get it somehow, about the things that he has to work with every day in his practice. I believe that many of our county society programs can be vastly improved by bringing them out of the clouds, so to speak, and bringing them down to practical considerations.

I don't believe that the county medical society ought to depend on outside talent. One of the most important duties of the county medical society is to develop its own members as writers and as speakers. If the officers of the society will take the proper interest in the matter, they can develop some program of one kind or another that will accomplish that end.

I go to medical society meetings over the country and hear, or try to hear, discussions that can't be heard, for the simple reason that those who participate in these discussions have had no training whatever in speaking. Not being used to speaking, they talk into their vests or they talk to the floor or to a blackboard, and the people who have come to hear them can't understand anything they say. It is an important function of the county medical society to try to teach its men to get on their feet and tell what they know, or

to ask for the information they want and to do it in an intelligent sort of manner. I think that is a very important function of the county medical society.

The selection of officers in the county medical society is a very important thing. I sat not a great while ago in a medical society meeting where the annual selection of officers was to take place and heard the three gentlemen who sat immediately beside me say: "Well, who are we going to nominate for president?" Nobody knew, nobody had thought about anybody. Nominations were called for and nobody said a word. These three men put their heads together and said, "Say, Bill Jones over there is a good fellow. I don't believe he's ever been president. Let's make him president." One of them jumped up and nominated him and the deed was done.

I have seen that thing happen time and again. Then it came time to nominate a secretary. The man they had had been secretary one year. I made some inquiry and found that no man had ever served longer than one year as secretary of that society. The thing can't be done that way. There ought to be some very careful attention given to the matter of the selection of the officers of any society, and especially to the selection of the secretary, who should be kept in the harness long enough to know how to do the job. If he doesn't show some adaptability and capacity in the job, he ought to be gotten rid of and somebody else put in who can do it.

My impressions that I get from my observation of what is going on in the State of Michigan, I am glad to say, Dr. Brook, lead me to believe that your state has a wonderfully efficient corps of county officers. At the conference here last year we got some splendid suggestions that were offered by men who were present at that conference who didn't even know that they were offering us suggestions, but their suggestions showed that they had been giving the most conscientious and careful thought to the problems with which they are expected to deal as county secretaries. By the way, I should like to say, and should have said in the beginning, that we are delighted to have you meet here in the building of the American Medical Association; it was helpful for us to have you last year, and your meeting here has stimulated several state associations to plan for similar conferences at the headquarters of the American Medical Association.

While the promotion of the art and science of medicine is, in my judgment,

the basic, fundamental excuse for the existence of medical societies, the material interests of the medical profession should not be neglected in their programs of work. There are some questions affecting the material interests of physicians, affecting them for the moment, at any rate, that I do not believe any of us here or anyone anywhere else can answer. I think some of these problems are going to be settled by old Father Time and not by anybody else. But that does not mean that the county medical society should not give its most conscientious attention to these problems and labor to find solutions for them if they can be found.

Legislation, for instance, may be a matter of great import and Dr. Sundwall is going to talk to you about it. I sometimes wonder if we haven't legislated too much and if we haven't almost encased ourselves in an almost impenetrable wall through some of the legislation that we have fostered. But there is going to be legislation, whether you start it or whether somebody else starts it. It affects the material interests of the medical profession and it affects more the material interests of the public for good or for ill, and in my judgment every county medical society should try to keep itself informed as to the import and the trend of all medical legislation in its state, and every county medical society should work in close and intelligent cooperation with the proper committee of the state medical association and should respond cheerfully and promptly to the calls that are made upon it by that committee.

Dr. Brook has referred to narcotic laws and the number of violations of these laws. I don't want to destroy the force of anything that Dr. Brook has said, but I do want to say that I am thoroughly convinced that there are honest physicians who are right now in government prisons in the United States for supposed violations of the narcotic laws, who ought not to be there. There are those in prison who ought to be there, and there are probably some that are not there that ought to be, but the picture is not exactly as it has been drawn. There was an old gentleman in New York who had practiced medicine honorably and efficiently for thirty-five years or more, whose license was taken away from him, who was disgraced before the public because of a purely technical violation of the narcotic laws, one of the most tragic things that I have ever known to happen.

The county medical society ought to interest itself in these things from the standpoint that Dr. Brook had in mind; it ought also to interest itself in these matters from the standpoint that I am trying to present here. Don't let snooping, designing officials bring down disgrace upon one of your fellows unless it is deserved, if you can help it. It is a thing that the county medical society ought to interest itself in both ways. It ought to see to it that the man who needs to be convicted is convicted, so far as it can—certainly it should not prevent his conviction—but it ought to do what it can to protect the honorable, upright physician who may be in danger of conviction on the purest kind of a flimsy technicality.

The county medical society can do a splendid thing for the benefit of its members if it will develop some sort of program whereby those members may be informed as to what the laws provide, as to what the governmental regulations are, and there, Dr. Brook, I suggest is a splendid program for you to work on, to work out some plan whereby the county medical societies will be provided with this information that they can pass on to their members. We try to do it; we try to give you information about the narcotic laws, about income tax, about this, that and the other, but our effort in that direction can be intensified and can be developed remarkably if the state medical society and the county medical societies can take it up and carry it on much further than the American Medical Association can do.

Dr. Brook mentioned another thing that is of tremendous importance to organized medicine. I am not surprised that 300 men in Michigan are threatened with malpractice suits every year, and I dare say that if you knew the truth about it, the number is nearer 500. You don't hear of all of them. There are a number of reasons why that is so. One of them is the reason that Dr. Brook fears is rather widely operative. I have no doubt that there are cases of malpractice because of lack of knowledge of the attending physician. I am sure that there are cases of malpractice at the hands of ignorant physicians who don't appreciate what it means to be a physician, who never should have been registered as physicians. But there are other reasons, and they are worth studying by every county medical society. It is not an unusual thing for a malpractice suit to originate out of the desire of an individ-

ual to get out of paying his doctor's bill. Just that one thing creates a number of malpractice suits. The mere fact that some of our physicians are known to carry insurance policies is enough to stimulate certain kinds of individuals to start malpractice suits. I have had them tell me so; I have had men admit that very thing.

The medical society ought to oppose every sort of imposition upon its honorable members; it ought to oppose every sort of imposition on the public on the part of any of its members.

There is another purpose to be served by the county medical society, and that has to do with the leadership in civic affairs where medicine is in any way involved. The county medical society can do a great deal toward the improvement of the hospital administration in the hospitals within its jurisdiction, provided it will study the situation as it ought to be studied and inform itself as it should be informed and offer its co-operation in bringing about any needed corrections or improvements that can be made.

The county medical society can assume an important leadership to the great benefit of the community if it will co-operate (I use the word "co-operate" in the sense of doing whatever may be necessary that it can do out of its superior knowledge with respect to medicine and to public health) with established health departments. If I had my way about it, I would have a doctor on every board of health in the country, and I would be sure to see to it that he was a member, and an active member, of his county medical society. If I could do it, I would so arrange that he would be required as a member of the county medical society to keep the society advised as to what was going on in the health department. It would redound greatly to the credit of the county medical society and to the benefit of the public if that sort of arrangement could be made by every society.

I would have a physician on every board of education in every county in the United States, if I could manage it, because nobody but a physician can bring to an organization of that kind the knowledge that it ought to have. We can't have education without health; we can't have health without sanitation. Nobody has the necessary knowledge about sanitation in its widest sense except the medical profession. Its members owe it to themselves, they owe it to the community, to

give the community the benefit of that knowledge. And so I would have, if I could, an active member of every county medical society on every board of education in every county in the United States. I would have the county society require him to report to it about the problems that the medical profession should be especially concerned with in connection with education.

Another important duty that the county medical society can perform can be done through the assumption of leadership and co-operation with all sorts of civic organizations. These organizations are here; they are going to exist, no matter what you do, no matter what you don't do. You can help if you will try to show them the way, the right way, and in most instances they will be glad to be shown. That is not true in all instances, but suppose it takes a little while to get the thing to running right, take the time to do it and keep on; don't quit because one thing goes wrong; keep fighting, keep fighting, and thus extend the influence of scientific medicine.

The delegates who represent the county medical society at the annual session of the state medical association are very important officers of the county medical society and of the state medical association. The most extreme care should be taken in the selection of your representatives. As I look at the council of the Michigan State Medical Society, see them in action, talk with them, I think you have done wonderfully well in the selections that you have made. I have had the pleasure of attending meetings of your house of delegates only once. I was impressed with the earnestness, the sincerity of its members. I hope that you will always keep the standard of service in your house of delegates and in your council and in your other official bodies on the same high plane.

The county medical society ought to take an active part in the administration of the affairs of the state medical association through its delegates, and it ought to keep informed as to what transpires in the meetings of that body. You will be surprised, if you haven't done it, if after each meeting of your state medical association you will make an earnest study of the minutes of that body, and then see that your entire membership is informed at how much good your society will get out of that simple procedure. I have had man after man tell me that he never knew

what his state society did, that he never read the minutes of the house of delegates. We see every day the weakness that exists because so many of our members don't pay the slightest attention to the proceedings of the House of Delegates of the American Medical Association. They are not informed as they ought to be. By the way, Dr. Warnshuis, I think your delegates always report to the Michigan State Medical Society, (and I hope you will prevail on them to report even a little more fully every year about what goes on in the American Medical Association.

Another thing that has been touched upon in a way by Dr. Brook is an important thing for a county medical society to do. Keep accurate, complete records of your meetings and your membership. The job of writing the history of medicine in the state of Michigan would have been much easier if every county medical society had kept the records that very easily could have been kept with respect to the men who have made the history of medicine in Michigan. You have no idea, unless you have thought about it a good deal, how important it is that the story of medicine as it is made every day by the men who practice medicine should be accurately kept. We occasionally have a notice that comes to the Journal (Dr. Fishbein has mentioned it to me time and again) of the death of a man who we know has been a prominent man in one way or another, and yet we have the greatest difficulty getting any information at all about him that we can print in a sort of tribute in the columns of the Journal. We try to get information from the very community in which he lives sometimes without ever being able to get anything that is worthwhile.

The story of medicine is a wonderful story and as romantic as any that has been written. But it is much more a story of worthy achievement and service. The story is made in the every day lives of its practitioners and is worth recording and preserving.

The last thing I want to suggest to you is that the county medical society shall fully assume its own responsibilities. There may be things that you can't do for yourselves. Pass them on. Maybe your state medical association can do them. There may be things that your state medical association can't do for you. The American Medical Association will be glad to have those passed on to it and will try to do what it can. Maybe the American Med-

ical Association can't do them, but the effort ought to be made, first by the county medical society, then by the state medical association, and then by the American Medical Association. All effort ought to be made. But there are certain things which your state society can do for you and which the American Medical Association can do for you that they ought not do for you because for them to do them simply weakens you. The county society ought to assume its own responsibilities. It ought to exert its utmost effort to find the answers to its own problems.

There is a tendency, it is a growing tendency, upon the part of some medical societies to call on somebody else to do what they ought to do for themselves, which in the doing, would add greatly to their strength.

I am not going to impose on you further. I thoroughly agree with what Dr. Fishbein said about the solution of some of the problems with which medicine is actually confronted and with which some of us think we are confronted.

There is just one thought that I should like to leave with you. There is nothing that can take the place of scientific medicine, nothing in the world. If we can make every doctor realize that fact and live up to it, many of our troubles will disappear very fast.

Mr. Chairman and gentlemen, I thank you for your very great courtesy.

Chairman Warnshuis: Thank you, Dr. West. I am sure that our secretaries will gain a new insight into the objects and objectives of our county societies.

Carrying on as the House of Delegates instructed and also under instructions of the Council, one of the most important functions of our state organization is the keeping of our members abreast of scientific problems. It is for that purpose that our programs in our county societies, our Councilor district programs and our state Post-Graduate programs, are being arranged and are being conducted.

Dr. Bruce, of the Department of Post-Graduate Medicine at Ann Arbor, who has had active charge during the last four years of this movement on the part of our State Society, is going to talk to you on our Post-Graduate Objectives. (Applause).

Dr. J. D. Bruce: Mr. Chairman, Ladies and Gentlemen:

I know it was entirely out of the kindness of his heart that the Chairman refrained from notifying me that I was to speak tonight. I wish, however, that he

had been a bit kinder and refrained from placing this notice at my plate until I had finished what otherwise would have been a very good dinner.

Dr. Warnshuis tells me that if I had read my last month's Journal I would have had due notice: In acknowledging that I am two weeks behind with my Journal, I am not so badly off as the Doctor who wrote in to the Editor protesting against a certain advertisement in the Journal, only to be informed by our ever alert Secretary that it had been over fifteen months since the objectionable advertisement had appeared. While my delinquency in reading my Journal is not so flagrant, I am nevertheless properly contrite.

I have been very interested in the meeting thus far, and while it has absolutely no connection, I am thinking of a visit which I made recently to a certain learned society. Just before my introduction, a distinguished gentleman asked for five minutes to discuss a certain problem and talked for an hour and a half. Upon introducing me the Chairman turned to the distinguished gentleman and said, "With the regard Professor — has for time, I am wondering what is his concept of eternity." (Laughter).

Dr. West has covered in his usual interesting and convincing way some of the very important objectives in Post-Graduate Medicine. He has referred to the importance of the county unit in our organization as a whole, and it is to the individuals who comprise the county societies that those activities which have to do with Post-Graduate Medicine are especially directed.

I agree with Dr. West entirely in his concept of the responsibility which the individual doctor should assume, and that he is only fitted to assume those responsibilities when he is adequately prepared to meet them, and that he can only be adequately prepared to meet them when he has spent sufficient time in watching the work of others and in communion with others. No man is sufficient unto himself.

The undergraduate courses in medicine today, notwithstanding their increase in length, have been spread so thinly, science has broadened in so many ways, and we have attempted to introduce so much into our curriculum that it is difficult for the graduate just out of medical school to have a clear, sound conception of the problems that have to do with the practice of medicine. So it is incumbent upon us to supplement that work, beginning with his first

year in practice. He is not a complete unit in medicine at that time. In one connection, particularly, he has lost out in medical school, for the reason that one of the most important phases of medicine today is medicine with relation to community life. There is so little in the medical schools today to fit a man for meeting the constantly increasing problems of social and other maladjustments. Aside from the scientific side, then, it seems we should emphasize medicine in its social and humanistic relationships in our post-graduate activities.

Post-Graduate Medicine is not new to this country. Ever since medicine has been practised there have been Meccas to which men have traveled to augment and supplement their knowledge. These centers have been, in former years, oftentimes somewhat difficult to reach. Then, later, there sprung up a large number of so-called proprietary schools, which were developed for profit only, and in which the practitioner was actually exploited. Large fees have been collected from doctors for most inadequate returns.

When the post-graduate movement first got under way some forty years ago, a very small percentage of the schools in the entire country, which were advertising post-graduate opportunities, were properly fitted to give post-graduate work. Their objective was a financial rather than an educational one.

As time went on, as in the case of our under-graduate schools, these schools have largely gone out of existence, and in the future I am hoping that the post-graduate and graduate activities of the country will be mainly connected with our state universities and not as private, proprietary institutions. These do not have any place in our educational system in post-graduate and graduate medicine any more than the proprietary under-graduate school has had in former days.

While post-graduate teaching in medicine is not a new thing, our plan in Michigan is unique in that every agency that has anything to contribute is working for the success of the problem, and in harmony together. Our medical schools, our hospitals and our State Society are all united in this effort for professional betterment.

With reference to our objectives, we have in mind a program that would take rather too long to explain in detail tonight. Our program is still incomplete, but practically all phases of medical teaching have

been considered and attempts made to provide for them.

I think Dr. Colwell was somewhat disturbed when I called on him a couple of years ago with reference to the establishment of short courses for graduates, and told him that our activities at that time were going to be confined to a fulfillment of the needs of the general practitioner. He suggested to me that the interest of educators was in higher education. Our organization in Michigan is thinking of every phase of medicine. We are thinking in terms of short, intensive courses in the various branches of medicine which can be covered in periods from a few days to a few weeks. We are also thinking in terms of graduate medicine, leading to the Master's degree in the various specialties, and also of the Doctorate.

However, the great mass of work must be directed to satisfying the needs of the general practitioner, and to that end we are giving most of our effort.

The other evening I had the privilege of meeting President Ruthven of the University of Michigan at Dr. Davis' home in Ann Arbor. Dr. Davis, who is Professor of Pathology in the Detroit College of Medicine, has a tremendously good influence upon the students there in advising and helping them to better their work and to higher ideals in medicine. He has been largely instrumental in the formation of an honor group, membership in which is decided upon scholastic standing. He had with him that night fifty-two young men from the sophomore to the senior years. The Detroit College of Medicine, as you probably know, is not a large school. It graduates approximately fifty to sixty a year, and there were fifty-two members of this honor group. Of that group nearly seventy per cent had their Bachelor's Degree, twelve per cent had their Master's, one had his Doctorate, and another was preparing for it. This is very encouraging when we think of the fact that the Detroit College of Medicine until recent years has been under private ownership and control.

Dr. Ruthven spoke of the advantages in the prosecution of higher education, that is, education after college graduation, and advised that the young man should not go out with the expectation of coming back after a few years in practice, because he had seen so many fatalities among those going out, expecting to come back and complete their work. He advised, if they could get, by some possible means, money enough to take care of them for an addi-

tional year or two years, that they continue, completing as nearly as possible the thing they had in mind. He expressed himself as being heartily in favor of the development of opportunities for after-graduation activities along all lines.

Besides what we learn in medicine, besides increasing our ability to do more and better things in medicine, I think there is another side that might well be emphasized in after-graduation study. This thought comes to me from reading a book the other day, "The Meaning of Culture," by John Cowper Powys, an English scholar and philosopher. (I must say I am indebted to Dr. Dempster for calling my attention to this book.) He defines culture, which is most difficult of definition, as what remains with us after we have forgotten all the things we set about to learn; that is, the things that become a part of ourselves and our work, the things that are ours, not the other fellow's ideas, but that which we have absorbed and that have become part of ourselves.

In that plea for a higher culture he makes this rather significant and, I think, very practical illustration of the man on the street who says: "What has culture or what has learning to do with my enjoyment of this scene or that scene, this music or that? I can enjoy these as much as the man of higher education." But can he? Mr. Powys brings out the point which I think is a very excellent one—that the man who has developed beyond the stage in which he can take care of himself in the community and look after his own interests to a stage where he actually knows the meaning of the things that are going on about him—that a bird that he admires has a name and a place in bird lore; that a flower which he admires so much has a definite place and a name in flower culture, and so on in all nature, has a greater appreciation in the affairs of life. So beyond the fact that we are going to learn practical medical things in our scheme of post-graduate education, I think we can well combine with them certain cultural features that will not only make us all better doctors but better citizens, neighbors and friends.

Chairman Warnshuis: Our legislative history and experience has been trying and is still trying to us. What has been encountered in the past has been well recorded in the Journal in so far as we could record it, and in the reports that were made to our House of Delegates. After the experience of our last legislature, we

were somewhat at a loss as to what our future course would be. Consequently, in the reappointment of our legislative committee, who have been since last October studying the problem, we have with us tonight the chairman of that committee, Dr. John Sundwall, who is going to outline in certain measure and degree our legislative program for the future. Dr. John Sundwall, Ann Arbor. (Applause).

Dr. John Sundwall: Mr. Chairman, Secretaries of the Michigan State Medical Society, Members of the Council: I was asked to appear before this group this evening to say something about the plans of the legislative committee of the Michigan State Medical Society. I appreciate very much this opportunity of meeting with you.

It is with considerable temerity that I stand before you, for several reasons: In the first place one cannot be too careful in the choice of words or designations in view of the rather critical attitude that we have heard and seen manifested this evening. I should much prefer to be in that circumstance in which perhaps the choice of words would not be so important, as, for example, in the case of the young man who took some young lady out for an automobile ride one evening. He became rather demonstrative and perhaps a little wild, and the girl resented very much his attentions and finally said, "James, where is your chivalry?"

He said, "Why hell, I traded that off for a Whippet a week ago." (Laughter).

Personally I have spent a great deal of time and effort in endeavoring to size up and recommend some procedure for the future. In fact, as a result of my efforts I have prepared a paper along this line which I trust will be printed in the State Medical Journal, with a view of acquainting you with some of the trends at the present time along the lines of medical legislation.

Dr. West called your attention to the fact that we have relied altogether too much on legislation, that our statute books today are complicated, are really glutted with futile attempts at medical licensure. At any rate, I have attempted in this paper of some sixty-three pages to review as much as possible recent efforts along this line. The paper includes an introduction, followed by a discussion of what is wrong with our present medical practice acts, with some recommendations as to now we shall proceed in the future. Then I have taken up the matter of direct

measures, our concern with the state legislatures, and second our indirect measures, our concern for the public with public health agencies, with people in general, with a view to increasing or augmenting our efforts toward acquainting the public with the importance of sound medical legislation.

One thing is certain, we shall never have effective medical practice acts until the majority of the people understand the purpose and functions of medical practice acts and therefore appreciate them and want them.

Under the direct measures I have attempted to discuss the various trends in recent years, I have attempted to review in a measure the legislation of 1929 which was so effectively and concisely reported by the American Medical Association, Dr. Woodward and Dr. McDavitt, in a recent bulletin.

In recent years we have had a number of efforts toward the solution of medical practice acts. Of course, a recent trend is to take all the powers and functions of medical licensure entirely from the medical profession and place it in some other agency of the state government. A trend along this line is seen in the basic science laws where lay members now are in control of the basic science examinations.

At any rate, I have attempted in this rather extensive study to cover these various trends. Perhaps I have been partial and biased in my recommendation of certain procedures, but I have attempted to include both the pros and the cons with a view to bringing them forth for discussion.

I have not called the committee together as yet, hoping we would get this particular manuscript published so that it would get into the hands of the committees and others concerned, and so that we would have a common point or a definite point for discussion.

One of my first efforts will be, if it is feasible and possible, to get the executive committee of the council of the state medical association to sit down and listen to what we have attempted to put forward in this particular discussion, trusting that it may be published in the forthcoming issue of the Journal of the state association. I hope that we will have abundant reprints. We want a wide circulation just as soon as this is published. Then we shall call the committee together and we shall anticipate many meetings with the council itself in helping us to solve this particular

problem and in helping us to decide on some definite procedure.

We hope that it will be possible to put our particular recommendations or procedures before the county medical societies and at least one session in each county will be devoted to this particular problem.

Let us remember that the proceedings concerned with medical licensure constitute a big problem. The legislative committee can do little; the council can add much to what we do, but we shall need all of the assistance and all of the help of the state association and of the other professions in the state.

We hope to be able to put this material before you as soon as possible. We shall be very happy indeed to have you look over it, to write us, to comment on it, with a view of being solidified so far as to procedures so that we can go forward to the next state legislature having the understanding, the sympathy and the concerted action of all concerned.

I believe this, in a manner, will give you some idea of our proceedings in the future.

I thank you for your attention. (Applause).

Chairman Warnshuis: Dr. Sundwall, if you have the manuscript and it is ready for the printer, while this is the twenty-third of the month and we go to press in three days, it will be in the February issue of our state journal if that is soon enough for you.

These problems that have been touched upon this evening and the discussion that has preceded give us food for a round table discussion in which you can present your views, which the Officers of your Society, your Councilors and various standing committees are very desirous of obtaining.

We have gone over with Dr. Corbus, the Vice-Chairman of the Council and also the Chairman of the Council's Committee on County Society Work, a few of these problems. Dr. Corbus will open the round table discussion.

Dr. B. R. Corbus: Mr. Chairman and Gentlemen: Dr. West's reference to American Medical History leads me to comment that I have been privileged to add something to our soon to be published "History of Medicine in Michigan." That something is the letters that really make a diary, of a Dr. Porter who came to Detroit from New York in 1827. He found Detroit a mud hole with the sidewalks some four feet above the streets,—just a small village. Yet he found there a licens-

ing committee of doctors who had been appointed by the territorial governor. He got his license and went to Pontiac. He went over rutted, corduroy roads, walked part of the way because it was easier to walk than to ride. He located in Pontiac, and through the years one finds that he is having a rather continuous quarrel with some one of his competitors. Dr. Burr, in his work on the history, found that this man was a signer of the original territorial medical society, and he found that the territorial medical society had the privilege and obligation of licensing the doctors of the territory.

The profession thus early recognized the advantages of organization. As an organization they felt that they had an obligation both to the public and to themselves, to see that their ranks were filled only by properly qualified men. I fancy that the early society was something of a protective society, something of an educational society and something of a fellowship society. It so existed until our time. In those early days perhaps the fellowship part was even more important than it is today. Quarrels and bickerings usually give way with closer contacts, and it is evident that Porter and his contemporaries needed some sort of a leavening influence.

In these early days the doctor was a prominent man in his community. He took an active part in community affairs because he was a better educated man than most of his neighbors. There later came a time when the doctor became less of a power in his community. He was busy with his own practice. Other educated men came and the community ceased to look so much to the doctor as a leader. The proof of this lies in the fact that all these many social organizations that we have about us, with the abuses of which we complain, were formed and are operated today, with very little help from the doctor except as he is used much as a servant is used. We have, unfortunately, stood off from those groups which have been formed for social betterment to the detriment certainly of ourselves, and I think to the detriment of the public. In spite of the fact that organized medicine, as Dr. West has said tonight, has in the past, and is now making a great effort to have the doctor take his proper place in these activities, there has not been made the effort by the county unit which should be made.

A matter came to my attention the other day, which caused me to send a let-

ter to the Journal for publication in this coming issue. A minister in my town planned to give a series of sermons on the professions, and sent out questionnaires to doctors, teachers and lawyers. The questions that he sent to the doctors were very interesting and quite sane questions which had to do with the ethics of the profession. They were evidently made largely from the layman's standpoint; what should be the doctor's attitude in a consultation; should he be honest with his patient; how far should he go to protect his fellow physician, and other questions along the same line, all showing a distinct effort on the part of this man of another profession, representing the laity in a rather close degree, to get at something to present to his people which would be helpful to them and helpful to the medical profession.

My attention was directed to an article in his church paper, written before the sermon and headed "Mind Your Own Business." The minister commented that he had received many serious answers to his questionnaire but he had one which brought forth the heading of the article. This letter from a physician suggested that the minister, instead of discussing subjects beyond his scope, should stick to the Bible and preach the gospel. When the medical profession takes the attitude that their profession is nobody's business but their own, there is great danger that **SOMEBODY** is going to make it his business.

We see quite too many signs of this today. We have ourselves, for too long, lived within the narrow confines of our profession. We have made the things outside quite too little our business. The one great effort that organized medicine is making today, and the great ambition that the Michigan State Medical Society and its Council has had, is not only to educate the doctor so that he may be a better doctor, but to educate the public so that the public may better appreciate the doctor. We do not stand as well with the public today as we should like to stand. If we had not known it before we had it called very definitely to our attention during this last year when we were trying to put a perfectly reasonable bill through the legislature.

Speaking for the Council to the secretaries, I want you to help us with the part of the program which we consider to be of the greatest importance, and that is to take part in all your community affairs

which have to do with those things in which the doctor is concerned. There is no individual in your community who is so competent by reason of education, training and contacts, to help the public in these matters concerning hygiene, health and public betterment, as the doctor. We would like to see the counties make an organized effort so that not only will the individual doctors be welcome in these groups, but that through their activity in this work it shall be understood that the profession as a whole, as represented by the county society, is with them and helping them. In that way the profession will come into a better standing in the eyes of the public. In that way we will be able to do better work in the job that we have taken upon ourselves—to help to bring the public to a knowledge of what scientific medicine can do for them in promoting health and happiness, and not least, financial improvement. In so doing, we help ourselves.

This meeting is open for a discussion of any problem which you think will be of general interest, or any problem which is of local interest in which you think you may be able to obtain help.

Dr. Foster: Last year, after the conference in Chicago, the enthusiasm and interest in these splendid meetings has so spread that now we find our jobs decidedly political, and in judging from the new faces here I take it that many have succumbed to the rush to be county secretary to get into this one pleasant feature of our job.

There is only one question on which we seek some information, and that is relative to the requirements for membership as held out by most of the counties. About five years ago we suddenly woke up to the fact that we were operating under a set of by-laws and a constitution that had a printer's date of 1884 on the cover, and we proceeded to draw up a new set of laws to govern us locally. In that was incorporated a requirement that all members should be naturalized United States citizens; that is, possessing full naturalization. It was found necessary to revoke this rule just within the last few months, and we had no pleasant time during that particular meeting. It has since been wondered by a great many of the members of the Bay County Medical Society whether that rule is a rule applied in any other counties, and if so whether it works a hardship on anybody. It has in some instances. Lately we have been called upon

to use it a number of times, and we find that in some cases it is keeping from our membership certain very desirable members of the medical profession who, due to apparently some inadvertency on their part, have neglected to take out even their first papers. We have held rigidly to this rule, in a spirit of consistency, and we propose to do so. But it is for more light on the subject and experience in other counties that we would like to know what the procedure has been and what the result of it has been.

Dr. Corbus: There is no rule in the state society which will prevent an unnaturalized citizen from being a member of the county society. The county society is the sole judge of the qualifications of its members, subject to certain obligations which are set down, which are rather general. So there is no reason why the county society should have such a rule if they do not want it. Am I right, Mr. Secretary?

Chairman Warnshuis: Yes.

Dr. Corbus: Is there any other county society which has such a rule? (One).

Dr. F. G. Maloney (Gogebic County): I happen to be secretary of a county society and also am not a naturalized citizen. I don't see why that should be any bar to membership in a society. It takes five years before you become a naturalized citizen. In the meantime you are kept out of the activities of the society, and I think that should not be.

Dr. Corbus: I think that can be dismissed by the statement that it is quite within your province to change your rule, or keep it if you so desire.

Dr. West: If I may, I should like to say just a word about that. That is a question that has been considered by a great many county societies in various parts of the United States. Some of them have adopted a rule like that mentioned here tonight; others have adopted a modified rule which provides that if a man has taken out his first naturalization papers he may be admitted to membership; still others, most of them in fact, have no rule about the matter at all.

There is one more thing I should like to say, prompted by the Doctor's discussion with respect to the fact that he found his society was operating under a constitution and by-laws adopted in 1884. I don't know whether it is so in Michigan, but there are county medical societies in the United States that don't know they have a constitution and by-laws, if indeed they have. Within the last two weeks I have

received three letters from county medical societies asking me what their constitutions and by-laws provide. They didn't know where they were, they didn't know whether they had any, they didn't know anything about it.

I am inclined to believe that the constitution and by-laws of county societies throughout the country need some rather serious revision, but I would like to bring to the attention of the secretaries of Michigan this one important fact, that if you are going to revise your by-laws, remember that they must be made and kept within certain limitations laid down in the constitution and by-laws of your state medical association. Some of the state medical associations go even so far (and it is a wise rule, in my opinion) as to require that a copy of the constitution and by-laws of the county society must be submitted before a charter is granted, and they live up to that rule; it is a splendid rule. One or two require that copies of the constitution and by-laws of the county society shall be forwarded for minute examination by the state officers at certain intervals. I am not sure but that that is a good rule.

There is a real need for more uniformity in the constitutions and by-laws of the county medical societies. There is a committee that has been appointed to provide a draft for county medical society constitutions and by-laws, that has already made out and sent to state associations a draft for consideration, but so few of the state associations have acted one way or the other on that draft that the special committee has felt that it is not worth while to undertake the preparation of a model constitution and by-laws for county societies until more state associations have acted, because they are the parent bodies from whom county societies receive their charters. There is no use to draw up a constitution and by-laws for the county societies that won't fit and won't be in keeping with the provisions of the constitution and by-laws of the state societies.

Dr. Harry B. Knapp (Battle Creek): May I suggest that a standardized form of by-laws be gotten out by the American Medical Association and each society be asked to conform to that, at least, and add anything to it they may wish subject to the approval of the state association or the American Medical Association.

Dr. Theron S. Langford (Ann Arbor): Is there not already a standard constitu-

tion? I think our county had copies of that not over five years ago.

Dr. West: There is an old constitution and by-laws prepared about twenty-seven years ago, as I recall it, that has been very generally adopted throughout the country. Some of its provisions, however, are not in keeping with the demands of the times. Some of our county medical societies have improved it; some of them have made it worse than it was in the beginning by making disconnected amendments from time to time. That is just why, as a matter of fact, we need a general revision of the county constitutions and by-laws. The old model law which you had was at the time it was constructed, I think, a very wonderful instrument, but there are some of its features that have become moss-covered and are not applicable at the present time.

Dr. L. M. Snyder (Lansing): One thing which has been brought out this evening which seems to me important is about where the medical profession stands with the public. It seems to me that one reason the medical profession does not stand better is simply because of lack of advertising. When you stop to think about it, everybody is advertising in this country now. This last week I stood at the bedside of an old lady who had been bedridden for five years, and she actually pled with me to allow her to use a Theronoid electric belt because every day she heard such marvelous results told. I wondered at the time what was being done about the pollution of the atmosphere with radio advertising.

The Ingham County Medical Society finds itself at the present time with several members who ought to be in jail. We don't know what to do with them. We decided to revise the constitution, and we just can't find a constitution. One of the main reasons I had in coming to Chicago was to find out what to do and how to do it. I hope before I leave I shall have some real definite information on the subject.

Chairman Warnshuis: I should like to have Dr. West answer the nation-wide attitude on medical advertising and the radio, because that has come up in every state and it is an interesting thing.

Dr. West: I am one of those old-fashioned individuals who believes that if you want to destroy scientific medicine, get into the advertising columns. I think that would be the quickest way to do it. The doctor has no material commodity to sell in the sense that the commercialist has.

He has nothing but his personality and his knowledge of medicine and his personal ability to apply that knowledge. He can't compete in advertising with the quack, and whenever he starts to advertise he encourages the quack to tenfold increased effort and the doctor loses out, and the old lady will get more definite impressions about the marvelous value of that magic belt that the doctor has been talking about, because there will be more advertising of the magic belt. Whenever you start, they simply redouble their efforts.

There is a great deal more that could be said about it. It is destructive to the traditions of medicine. That is answer enough, as a matter of fact.

Now about the radio. There is a great deal of slop that goes out over the radio. It is a hard situation to control. In fact, it can't be controlled at the present time, but I am encouraged to believe that the Federal Radio Commission has had its eyes opened and that in due time, or in time, I don't know whether it will be due time or not, some action will be taken to limit the outrageous fakery that is being put out over the broadcast.

We have some of our brethren who are a little disposed to take advantage of the opportunity offered them through the wonderful possibilities of the radio, whom we might deal with ourselves. There is the responsibility of the county society that it can't evade if the job is to be done.

I will say that the American Medical Association has expended a great deal of effort in trying to bring about a correction of the undesirable trends of radio advertising, and that our efforts have been successful to some extent at least. We have secured the co-operation of individual radio stations in stopping pernicious broadcasting.

One of our representatives appeared before the Federal Radio Commission at a very important hearing a few months ago, with the result that one of the worst fakers in the United States was denied the services of the station which he was paying an immense sum of money to use, and has been forced finally to secure the facilities of a station with a very limited range. In some other instances we have had success.

It is a proposition that is difficult because the thing is highly commercialized. There is money in it, and it is mighty hard for men with commercial enterprises to resist the appeal of money that they can reach out and get simply by letting some

fellow get up and talk over the radio a few minutes.

There are some radio stations that are owned outright by quacks. I believe that their existence will soon be terminated. I don't know how soon, but if it is done within two or three or four years it will be a fairly satisfactory development.

Chairman Warnshuis: I want to say, Dr. Snyder, that in regard to the constitution, at the last meeting of our House of Delegates a committee was appointed to re-draft and revise our state constitution, which in some respects is quite obsolete, and in the re-drafting work it is the contemplation of the committee also to draw up somewhat of a skeleton outline that can be used by county societies to revise or to re-adopt new constitutions for their local organizations.

The problem about which you wrote me and which you mentioned tonight, of some of your members who should not be members of your society, is a difficult problem. As you say, they are the first ones to pay their dues, because they are afraid they are going to be dropped if they don't pay within the limited time of grace that is given for the payment of dues. Your members have not positive evidence that they can present before their Board of Directors or the Council of your society upon which to prefer charges and prove them guilty.

If the situation is as serious as your members in Ingham County feel it is, I know of no other way than to disband your Ingham County Society, adopt a new constitution, and re-elect your members. There, again, arises a question of whether you can do that legally and whether or not you will not be enjoined if you do, until you prefer charges against these members. I believe, however, that is the way I would try to solve the situation when you have a group, as you have there in Ingham County, that you want to discipline, but you can't do it with the provisions that are at hand now.

Dr. T. P. Wickliffe (Lake Linden): I just want to bring greetings from the most northern outpost of organized medicine in the State of Michigan. We have forty-two paid members in our society. We have an average attendance of 50 per cent of all our members at our meetings once a month.

With reference to the advertising and radio publicity, this year our County Society has undertaken to give fifty-two weekly health talks. I first wrote to the

A. M. A. headquarters and asked for their advice and suggestions with reference to public health radio talks, and they were very much in favor of them. We got our literature prepared for us and we give these talks every Wednesday at 12 noon over radio station WHDF.

Dr. West: Is the name of the broadcaster mentioned?

Dr. Wickliffe: The talks are announced over the radio in this manner: "The weekly noonday health talk comes to you from the Houghton County Medical Society. The subject is so-and-so." The name of the reader of the article is not mentioned, and it comes only from the medical society with its authority. There is no individual advertising, and the committee on public health sees to that.

We are fortunate in having a very active society. We don't seem to have any trouble in getting along. Our men are willing to give talks. We have round table discussions such as suggested by some of the previous speakers.

As Dr. West says, we do everything for ourselves, and I think that is one of the secrets of a successful society.

Dr. J. F. Carrow (Cadillac): What Dr. Sundwall and Dr. Corbus said about our standing before the legislature was putting it quite mildly. It has been my province in the last four years to be a member of the legislative committee, and if you remember, there was one certain senator who stood out and fought every piece of legislation that was attempted to be put forth in the 1927 legislature. That was stopped by reason of being close to him personally. You know what happened in the 1927 legislature. If we hadn't had a governor who had pledged that he would attempt to do certain things, we would have had some legislation that would not have been at all good for the regular practitioners of medicine.

I am mighty glad that Dr. Sundwall is putting this forth in such a manner that all the doctors may have a chance to analyze it. As a remedy I would suggest that we be a little better politicians; in other words, cultivate our lawmakers and get on with them so that they will protect our interests in the future, because these things will come up from time to time. As a matter of fact, we sat back in the consciousness of our own ability and rectitude and four or five went down there before the hearing in the legislature, while some of the cults had 500 or 600 people down there. That impressed them with

the possibilities of votes, whether it was based on common sense or science. We should prepare ourselves and line up to protect our interests in the future. With good, safe, sane legislation, we can get our prospective lawmakers to talk it over as we did in our society, where we had two representatives and two senators to dinner one evening, and we went into the legislation in a friendly, neighborly, round table talk, and when the matter came up our men voted right. But, unfortunately, they were very much in the minority.

I don't think it is necessary for us to go out and talk over the radio or go into print if we just cultivate a friendly feeling with our lawmakers and show them in a quiet, dignified way what the regular practitioner has done for his patient in the last few years, and what the other parties have not done, although we don't want to emphasize that. Then we will get somewhere in the future legislation.

Dr. Langford: It is, of course, quite foreign to this group to consider us political in any way, but if I understand the situation as it was at the last legislature, our cause was very much affected by the fact that the presiding officer of the senate appointed as chairman of the public health committee a very active exponent of the chiropractors. That should never occur again. Whether this man may candidate again or not I don't know, but there is in the offing a very capable man who served in the senate many terms and is very friendly to the proper medical practice (I cannot mention his name now, but it is possible the doctors may be circularized in his behalf), who has been approached by several physicians and has almost consented to run. It would be very fine if the doctors of the state and members of the society would write him and ask him to make a stand. I think he would consent to run. He is a capable man with a great deal of experience and absolutely level.

"Woodward and McDavitt, in their concise survey of federal and state legislations proposing to regulate the practice of the healing arts, the rights and duties of practitioners, since January 1, 1929, give at least 150 references to bills introduced which were more or less concerned with the qualifications of those who practice the healing arts, physicians and cultists.

"Various impressions follow the perusal of this survey. The apparently incurable American habit of attempting to legislate anything and everything into recognition

and authority is manifested in the 1929 crop of medical bills. Those interested or engaged in the practice of the healing arts seem to possess unbounded faith in legislation as a means of instituting and maintaining what physicians term professional conduct. Contrary to often-expressed opinion in circles of the medical profession, cults are not dying out. From one end of the country to the other, legally recognized cults are maneuvering for and securing more power, and new cults are seeking recognition. Jealousies and quarrels among doctors would probably be the reaction of laymen to these medical legislation efforts.

"Wherein does the protection of the health of the public come?" may well be asked.

The mortality of this grist of bills was high, and on the whole one is constrained to commend the executioners. Our sympathy is with them, at any rate, in view of the huge mass and amazing variety of medical legislation sought for, all of which had to be considered and disposed of one way or another. Perhaps state legislatures are not so bad after all, even though, on the whole, this year did prove to be a tough one on bills sponsored by the medical profession.

"Generally speaking, solar plexus blows were meted out by legislatures to most of the medical practice bills prepared by the medical profession in 1929. The Michigan legislature proved no exception to this. Notwithstanding the conscientious, continuous and tireless efforts of Dr. Guy L. Kiefer, chairman of the legislative committee of the Michigan State Medical Society, to see to it that the bills prepared by this committee and approved by the council of the society were properly introduced and intelligently considered by the legislature, these bills, Senate bills 160 and 161, met with a complete shut-out. In fact, they were disqualified even before they had an opportunity to come up for the legislative knockout. Dr. Kiefer did everything possible to obtain favorable consideration for these bills, but ran up against an impregnable wall of indifference and opposition. Insult was added to injury when the Michigan legislature turned around and passed the chiropractic bill and the osteopathic bill, which gave to osteopathy rights of practice almost equal to those of the medical profession.

"Governor Green is to be commended for the intelligence and courage he manifested in vetoing these bills. By doing so, he

rendered a genuine service to the people of Michigan in thus protecting their welfare. I say hats off to Governor Green."

I have just read this introduction with a view of bringing out the fact that we have a great deal of work to do other than that concerned directly with legislatures. This particular work has already been brought out in the discussion. We have got to work with the public, we have got to make public health and the other professions of the state understand that they have got to take a much greater interest in medical practice acts in the future.

One of the great troubles with our medical practice acts is the fact that we can be accused in the very largest measure by cultists as having a proprietary interest in these acts; in other words, we have sponsored them, we have written them, we have brought them before the state legislature, we have pushed them through. After we have gotten them through, the statute provides for an examining board made up entirely, almost completely, of our own profession, so that we go so far as to determine who shall be qualified, and then we have enforced them in the largest measure. No wonder, then, that the cultists can plausibly accuse us of owning, in a large measure, or having a proprietary interest in these things.

At any rate, I just wanted to call your attention to the fact that there is something more fundamental and more important than just trying to write a bill for a state legislature. It is along this particular line that I have attempted to call attention to some of the other procedures more fundamental to which our attention must be directed.

Dr. Langford: I want to bring up a certain matter which I discussed with Dr. Dodson. Due to certain local conditions, I took up with him the question of whether or not medical directors of great life insurance companies had any provision that those who examined for them should belong to local medical societies. Dr. Dodson has written to one of the presidents, with whom he is personally acquainted, and has gotten a rather peculiar reaction, that they are not quite inclined to do that, which is rather a surprise to me. I should think that would be a thing they would want to co-operate with at once.

Chairman Warnshuis: As a rule, I receive an inquiry from the medical director of one of the actuaries of our large companies asking whether so-and-so in such a location is a member of his county so-

ciety and the state medical society, so I do know, and know from other experiences, that the majority of these men make it a qualification that the man must be a member of his county society before he can be appointed a local examiner. There are, I believe, some of you in this room who are examining for some of these large companies, and who know that that question is asked in the application blank that you file.

Dr. Langford: I happen to know there are two or three men who are examiners for large companies who are not members of our society; neither could they be elected if they applied. We have no recourse in the matter, because they are licensed to practice and are qualified to take the position offered them.

Chairman Warnshuis: I will be very glad if you will send me the names, also the companies, and I will write to the directors of the companies. Our correspondence with these larger insurance companies has always been of a satisfactory nature and they have shown preference for those who have allied themselves with organized medicine, in making their appointments.

Dr. Kathryn M. Bryan (Manistee): There is a law that requires the physical examination of chauffeurs. There is not a week that goes by that I don't receive from one to a dozen inquiries from the state department of health, asking if this man or that man is a member of the local society, because he has examined some chauffeur for his annual license, and they want to know whether this man has a right to make the examination. The rule applied by the state commissioner of health is that these examinations are to be made only by members of county medical societies, and he will not accept the report of anybody who is not a member. I know in several instances men who have had connections with large cab or delivery or trucking companies have become members of their local county societies just in order that they could make these examinations.

Dr. Langford: May I ask if any secretary knows of any doctors in their towns who are not members of the society who are doing this work? I happen to know of two or three in our town.

Dr. T. F. Heavenrich (Port Huron): In some of the larger life insurance companies, medical directors are a little lax in allowing the agent to choose his examiner

in that particular locality. If the secretary of the county society will take that matter up with the insurance company, notifying them that the man who is doing the examining is not a member of the society, I think it will be taken care of.

Chairman Warnshuis: I have been directed by the Council to call to the attention of the secretaries this question of our Medical History. Dr. Burr has been laboring for three years in the compilation and writing of a medical history of Michigan. It has been my privilege to see the manuscript and also to make arrangements with the publishers for the publication of this history. The manuscript is now in the hands of the printer. There will be two volumes of approximately 750 pages each, not a dry biographical narration of medical facts and medical events in Michigan, but a really classical write-up of our medical life from as far back as records were available. I believe the greatest tribute that we could give to Dr. Burr for this tremendous labor that he has been engaged in for the last three years would be to cause that history to receive a tremendous sale, to place it in the hands of every doctor in Michigan, because it is something that you are going to enjoy, I can assure you, and something that is going to be fascinating.

The two volumes cost \$10, approximately 1,500 pages in the two volumes.

In the next issue of the Journal there will be a subscription list, asking you to make your subscription for this history and to remit \$5 for the first volume, which we hope to be able to deliver by the fifteenth of April. The second volume will be completed along in the late summer or early fall. At the time the second volume is about ready, you will receive a notice and be requested to remit \$5.

The importance of this pre-publication subscription is that we want to know how many volumes, or how many sets to print, and we are asking the county secretaries, through their notices and through their bulletins, to secure these advance subscriptions in order that we can arrange the necessary publication details.

As I say, it would be our greatest tribute to Dr. Burr if we caused this to be placed in the library of every doctor. I am quite sure that every doctor who once gets his hands on it is going to be fascinated with the narrative that Dr. Burr has set forth, and you are going to read it not once, but several times.

The Council asks that you, as county secretaries, bring this to the attention of your members and endeavor at your next meeting to take advance subscriptions.

Just before we adjourn, I want to take the opportunity of introducing to you "Red" Burns, or W. J. Burns, (not the detective), the erstwhile secretary of the Toledo Academy of Medicine, now the executive full-time secretary of the Wayne County Medical Society, a graduate in law, and, I feel, a tremendous addition to organized medicine in Michigan.

Mr. William J. Burns: I just want to thank Dr. Warnshuis for his kind remarks. I am delighted to be here and I want to know each and every one of you very closely.

... The meeting adjourned at ten forty-five o'clock. ...

SECOND SESSION

The second session of the Annual Conference of the Council and County Secretaries of the Michigan State Medical Society convened at the headquarters of the American Medical Association, 535 North Dearborn, Chicago, at nine-fifty a. m., Thursday, January 23, 1930, Dr. Warnshuis presiding.

Chairman Warnshuis: Most of you know Dr. Cramp from the reports he has made from time to time in the Journal. Therefore, he needs no introduction, except that we owe him a debt of appreciation for the work he has done to clean up the quackery of this country. He is now going to talk to you on some of the work of the Bureau of Investigation. (Applause.)

Dr. Arthur J. Cramp: The Bureau of Investigation is essentially a clearing house for information on pseudo-medicine. It has under its present name and under its earlier name, "propaganda for reform," for over twenty years been giving the profession and the public the facts regarding patent medicines, quacks, and pseudo-medicine in general.

Until about four years ago, the department now known as the Bureau of Investigation was spoken of as the propaganda for reform department. The word "propaganda" got into bad odor during the war; further, the actual propaganda of the department had become largely unnecessary, and it had reached the place where it was doing purely educational work rather than aggressive propaganda, and it seemed desirable to change the name from propa-

ganda department to Bureau of Investigation, which more correctly and more broadly expresses the field that it covers.

The work of the bureau grew out of the work of the Council on Pharmacy and Chemistry. There is still a good deal of misunderstanding on the part of the profession as to the functions of the Council on Pharmacy and Chemistry and of the functions of the bureau. Many physicians still think that the Council on Pharmacy and Chemistry will be able to answer or will answer and wishes to answer questions on patent medicines and on quacks. The Council does not do anything of that sort. It deals, not exclusively but mainly, with those proprietary remedies that are sold essentially or nominally at least for prescription purposes.

It is a fact that there is no clear line of demarkation between the so-called ethical proprietaries, using the term "ethical" in a sarcastic sense, and the patent medicines, and many a patent medicine on the market today has been introduced originally as a prescription product nominally. Antikamnia, with its monogram AK stamped on every tablet, Fellow's Syrup of Hypophosphites, Gray's Glycerine Tonic, Sal Hepatica, Gude's Pepto Mangan, and many others, were introduced to the public through the medical profession. After they reached the place where they were independent of the profession, they frankly went over to the newspapers and became in name instead of in fact only, patent medicines.

The big work of the bureau is answering questions. We get thousands of them. Twenty years ago it was the rarest thing for us to get a letter from a layman. Last year alone, 1929, the Bureau of Investigation answered over 6,000 letters to laymen, to say nothing of the thousands that came in from physicians, and I suppose that Dr. Dodson's department, the Bureau of Health and Public Instruction, answers considerably more than that.

Until the creation of the bureau, or rather, the creation actually of the Council, which later became the Bureau of Health and Public Instruction, the propaganda department of the Journal, or, as we now call it, the Bureau of Investigation, was the only point of contact between the organized medical profession and the public. Today, of course, that is no longer true. The Bureau of Health and Public Instruction has work that is almost exclusively devoted to the education of the pub-

lic, and Hygeia, of course, is another factor that comes in the same category.

The answering of letters, then, is really the big work, although physicians generally have an idea, I think, that probably the big work of the bureau is that of preparing the weekly article for the Journal, that is by no means the heavy work of the bureau. It is not necessary for me to tell you that the answering of these letters is not a matter that can be done lightly. The majority of the letters that go out from the Bureau of Investigation are in the very nature of the case libelous per se; they can't help but be if we are going to tell the truth. For that reason we have to have documentary evidence for every statement that we make, and it is for that reason that all material accumulated in the Bureau of Investigation, and the correspondence, is kept. We do not destroy our correspondence files after four or five or six or seven years. We have correspondence going back over twenty years. We have advertising matter going back over twenty years, and we are ready at any time to produce documentary evidence for every statement that is made, either in letters to physicians or laymen, or in articles that appear in the Journal or in Hygeia.

In getting its message to the public (and that, of course, is the big work of the bureau), it is hampered by the fact that the only contact we have with the public is through the profession; in other words, the Bureau of Investigation does no advertising in lay publications telling the public where it can come to get the information that it has for it. We do have and have had now for the past year one point of contact that is very gratifying. As all of you know, I think, the association is broadcasting daily from a room over in the corner there, over WBBM. Every so often I have to give a talk on some phase of the bureau's work, that is on the patent medicine subject or on the subject of quacks. We cannot, in the nature of the case, deal with specific products when we are on the air as we could if we were writing, but at the same time we are able to give the listening public (and, by the way, our public, as a rule, because of the time of day that we go on the air, is nearly 90 or 95 per cent women—and a very excellent public to reach) the information that there is such a body as the Bureau of Investigation and that it stands ready to help. The result has been that each time after a talk has been given telling the public about the

work of the Bureau of Investigation, we have gotten a very large number of letters. If the talk has been on some specific subject, such as obesity cures, female weakness cures, rheumatism cures, asthma remedies, the inquiries will in general follow that same line, but if it has been a general talk and we have told them, as we do at the end of each talk, that if they have any desire to get information about any kind of patent medicine or any quack or medical cult, if they will write in we will give it to them, we get a large number of general letters.

I spoke about a week ago, perhaps a little longer, in a general way on some patent medicines, and made that statement at the end of the talk. We are still getting from five to ten letters a day from laymen asking for specific information on specific products. We are able to give them the information in, I should say, 90 or 95 per cent of the cases. In any case, we write them the letter. If we don't know, we say so. If we think they may be able to get information that we haven't, from government sources, we tell them that, although the real situation is that things are reversed, that we get hundreds of letters every year from laymen, and from physicians, too, for that matter, but especially from laymen, who have written first either to the Public Health Service at Washington or to the Bureau of Chemistry at Washington, or to some state health department or to some municipal health department, asking for information on some particular patent medicine or quack, and in every instance, instead of giving them the information, they refer them to the Bureau of Investigation of the American Medical Association. I think it is unfortunate. I think that the state should do more of the work that the bureau is doing. In fact, I think that the work that the bureau is doing and has done for twenty years past is a work that very properly belongs to the state in its proper sense. While state medicine is altogether deplorable, the dissemination of information by the state on matters of health is altogether desirable, but state health officials fight shy of giving specific information on patent medicines and quacks.

Question: Should a county medical society secretary or officer of a county society properly answer requests for information about some local patent medicine man, or had we better refer those to you?

Dr. Cramp: I would say in the case of the local society, because there you have

the medical profession, if you have the information on file I think it carries greater weight, probably, coming from the local medical society. But my point was that the medical profession, as a profession, should not be called on to do the work that we are doing. We do have a certain moral obligation, though it is a rather vague one, but the state has a rather definite obligation to give the information that we are giving three hundred and sixty-five days in the year, which the state does not do in any instance.

The work of the bureau is also carried on by preparing pamphlets for distribution to the laity. These pamphlets are about twenty in number and deal with group subjects. We have these quack cancer cures, for instance, in one pamphlet, quack consumption cures in another, cosmetic nostrums, harmful or fraudulent, in another, epilepsy cures in another, female weakness cures, nostrums for kidney disease and diabetes, and obesity cures. The only reason we classed kidney disease and diabetes together is because in the public mind diabetes is a kidney disease. Considerably over a million and a half of these pamphlets have gone out, I presume. While they are sold at a nominal price, we send out thousands of them gratuitously.

A woman writes in and says: "What can you tell me about Lydia Pinkham's Vegetable Compound?" Instead of writing her a letter giving her the information, we can send her a pamphlet on female weakness cures that not only tells her about Lydia Pinkham's, but about Wine of Cardui and forty or fifty other nostrums of a similar character, and so on through the other groups of nostrums.

In addition to these pamphlets there is the book, Nostrums and Quackery, which is now in two volumes, and I hope before the end of 1930 will be in three volumes, which contains essentially the same material as is in the pamphlets, but in book form. The first volume was issued in 1912 and contained all the matter of interest to the public that had been published in the Journal up to that time. The second volume was published in 1921 and started where 1912, or Volume I, left off, and contains all the material of interest to the public that has appeared from 1912 until 1921. It has a duplex index, indexing both volumes. It is an unfortunate fact that Volume I is now out of print. Volume III of course, will start where this leaves off and will bring it down to 1930, possibly

to the middle of 1930, according to the time we get it out.

There are, in addition, a number of educational posters that the bureau has prepared. There are forty of them all together. They are for free distribution to any county medical society that will promise to display them. It won't cost you a cent to get them. They are sold, but to any county medical society that will display them at the county fair or the state fair or the health exhibit or in any other way, they are yours for the asking, and with them we will send a complete set of these pamphlets for display purposes, and a copy of Nostrums and Quackery.

These are being used rather largely in schools and colleges and rather extensively in state fairs, county fairs, and health exhibits over the country. They deal very specifically with subjects; they are not in generalities. Here we have five testimonials for a given consumption cure, the name of which is given, and they are reproduced, photographically. They were all written, by the way, in good faith, and the people who gave them, of course, were all dead and they all died of consumption.

In that way we are able to carry a message to the public by the visual means, the best means, probably, of getting over our story.

Question: What means will the county society use to display those?

Dr. Cramp: Various means. You may have a county fair, and in such a county fair there will be undoubtedly some part of it devoted to health subjects; that is a good place for them. There have been cases in which the county society has gotten some local person to let them have the use of a vacant store window and has put up three or four daily, changing them every other day. In the case, for instance, of large cities, New York and Chicago have used them by putting one at the entrance to the health department, where thousands of people are coming in daily, and they change them every other day or every day.

Every sheet of stationery that has gone out from the Bureau of Investigation for a good many years has carried on the reverse side a boiled down statement regarding the American Medical Association, what it is, what it is trying to do, and what are some of the Councils and Bureaus in the Association, including, of course, a more detailed account of the Bureau of Investigation itself.

On the bottom of each sheet of station-

ery is the statement that the functions of the Bureau of Investigation are wholly educational and not punitive, because the public and some physicians have the idea that it is the function of the Association or the Bureau of Investigation to prosecute quacks. It is not. We have done our full duty when we have given the public and the officials who have been properly appointed for the prosecution of fraud, such facts as we have unearthed, and have given also to the officers of the law any help that we can give them should they start prosecution.

This is a price list and description of the posters.

There are also a number of lantern slides that have been prepared for those who want to give talks on patent medicines. They are for the use of physicians and health officers. They are for rent at a nominal price. The price is so low that it does not cover the actual cost of handling them. They can also be purchased outright practically at cost. They are being used in educational institutions sometimes by professors in the colleges whose subjects have a health angle to them.

Dr. West: Will you say a word about your co-operative effort with the government bureaus?

Dr. Cramp: The Federal Trade Commission, in the last two or three years, has been doing excellent work in going after certain medical frauds that cannot be reached through the Postoffice Department because they are not mail frauds or are not under the Federal Food and Drug Act, because they are not subject to that law. Take, for instance, a fraud like the Theronoid or the I-on-a-co or some of the mechanical fakes of a medical character, or Marmola, the obesity cure, which was going to have a fraud order issued against it, but they made an affidavit that they would quit using false labels and tell the truth on the package. The Federal Trade Commission has gone after some of these on the broad grounds of unfair trade competition and has been able to get what practically amounts to conviction. In other words, they have what they call the "cease and desist" clause, and they notify the manufacturer that he has to cease and desist selling that thing, and if he doesn't cease and desist, they have a chance, of course, to get into court and the thing has to be heard by the court, and if the court sustains the Federal Trade Commission, the man or the company will be in con-

tempt of court if he continues to disobey.

The Bureau of Investigation has worked very closely with the Federal Trade Commission. We have given days and days of time to helping the attorneys. Personally I have sat in at the side of the attorneys when they have had hearings in Chicago for a week at a time, in some cases longer; I have given them help in giving them the names of high grade men who would help them in the case. For instance, in the Marmola case, I took the attorney to see Dr. Woodyatt and Dr. Solomon Strouse and Dr. Elliott, and all three of those men offered to testify and did testify, without one cent's expense to the government. Each one of them gave the best part of a day.

In another case, that of the Vito-Net blanket, Dr. Carlson and two or three other physicians of equal standing also offered to testify and did testify and gave of their time. I gave of the Association's time by being down there and taking with me all of our files on the subject, together with a lot of information about individuals that these quacks were going to call on to testify. When the Vito-Net blanket people were going to put a doctor on the stand, I was able to hand to the attorney information showing that the man was an outrageous quack and had never been inside of a medical school and was generally an all-around rotter, and they used that in evaluating that man's testimony.

The Bureau has also helped the Post-office Department in these various mail order frauds. I suppose not a day passes but that some state health official writes in for the low-down on some particular fraud that is being perpetrated in his own bailiwick.

I understand that this afternoon you are going around the building, and you will then have a chance to come into the room in which the Bureau of Investigation functions, and I should like to have the opportunity of showing you the filing system that we have there, a filing system that takes care of between 200,000 and 300,000 documents, correlating all the material that has accumulated in the past twenty years in the Bureau's files. (Applause).

Chairman Warnshuis: Dr. Woodward is in Washington on Association business. We will pass temporarily the item of the Bureau of Legal Medicine and Legislation until Dr. West tells us some of the activities of that Bureau.

Item 3, the Council and the Laboratory,

will be given us by Dr. P. N. Leech, of the Council on Pharmacy and Chemistry. (Applause).

Dr. P. N. Leech: Mr. Chairman and Members of the Michigan State Medical Society, Councilors and County Secretaries: If I may, I should like to take fifteen minutes and give three separate, distinct five-minute talks. I notice, in the first place, that I have been asked to make some remarks on the Council on Pharmacy and Chemistry. Frankly, I am closely in touch with the Council on Pharmacy and Chemistry, but I am not directly connected with it. Professor Puckner, as you know, has been its Secretary for a great many years.

That Council has a birthday on February 5. At that time it will be twenty-five years old, and, as I heard Dr. West say not long ago, the work of the Council on Pharmacy and Chemistry, using his metaphor, is one of the crowning glories of the American Medical Association.

I do not know how often it occurs to you that the work done by the members of this Council is done without any remuneration whatever. The Secretary is the only one who is paid. Here you have a Council composed of a group of men who are specialists in their line, who are giving unstintedly of their time and their expertness simply to further medicine. Of course, no one has a right to belong to a profession who does not expect to give something to that profession, but the American Medical Association is not asking for an average amount of time, it is asking for a large amount of time on the part of these men, and they are giving it willingly. Even further, there are on that Council men who do not belong to the medical profession, who, strictly from an altruistic standpoint, are willing to aid in the advancement of science in general and medicine in particular.

The Council on Pharmacy and Chemistry, as you know, is organized to advise the medical profession concerning undesirable secrecy, fraud and imposition, and unwarranted advertising claims. The functions of the Council may be divided into three classes: First, and probably the most important, is to pass on evidence submitted by the manufacturers concerning the merits of a new preparation, sometimes proprietary, sometimes not proprietary. This evidence is judged according to a set of rules. If the product is found acceptable, it is listed under New and Non-

Official Remedies, which is revised annually. The force of that book is that neither the Journal of the American Medical Association nor any of the state journals, with one exception, accept advertisements for proprietary or non-official products unless they are listed in New and Non-Official Remedies. You can see, therefore, at a glance that it is to the manufacturer's advantage to get in New and Non-Official Remedies. The very prestige it carries, the very fact that the advertising of this product may be carried in journals where the company is respectable, means much to the manufacturer.

I wonder if I could venture this far and express the hope that the time will come when all the county medical bulletins will be as scrupulous about their advertising as are the majority or all of the state journals, with one exception. It is one of the things that trouble us somewhat to see that a state as a group stands up for the principles of the Council on Pharmacy and Chemistry and the county bulletin, on the other hand, will accept almost any kind of proprietary advertisement, presumably for the sake of the revenue. I think it is one of the things that should be thought of very carefully. Dr. West last night made a remark about responsibility resting on the county society. I think that is one of the items that could be included under that general head of responsibility.

Another function of the Council on Pharmacy and Chemistry is to rationalize materia medica, to aid in the promotion of better therapeutics. In this manner it forms contacts with committees in medical schools; it sends New and Non-Official Remedies to appointed delegates on the faculty so that the young medical student will early become acquainted with what is good and what is bad in proprietary medicine. Of course, you must not lose sight of the fact that the advances in therapeutics depend largely upon proprietaries. It is just as essential for a profession that wishes to become aggressive to use proprietaries that are good as it is essential for that profession to be warned of proprietaries that are bad.

It also stimulates the publication of articles dealing with debatable therapeutic procedures; that does not include biochemical diagnostic methods or physical therapy. For instance, it has a series of articles on the present status of glandular therapy, on vaccines, and these

have created a tremendous response on the part of the profession as measured by the number of requests for reprints which have been received here at the home office.

The third function of the Council is purely advisory on scientific matters. An association that stands out so prominently in the minds of the public for accurate scientific pronouncements is naturally called on frequently by government officials or other officials to render opinion concerning certain current topics affecting the practice of medicine or the enforcement of laws dealing with medicine. The House of Delegates has wisely, therefore, on occasions referred to the Council on Pharmacy and Chemistry, certain questions. For instance, with reference to the narcotic act, the enforcement bureau has at times sought information as to whether or not codeine is a habit-forming drug. The Council on Pharmacy and Chemistry has made an extensive study and reported on it. An organization ought to have within its general group a specific body capable of digesting the evidence and rendering opinions which will be safe on such debatable and far-reaching matters as that of habit-formation by codeine.

When the Council on Pharmacy and Chemistry was first formed, one of the common impositions on the part of the manufacturer was to throw dust in the eyes of the physician by inferring that he was informed concerning the composition of remedies, when in reality they were secret. And it was largely for that purpose that the chemical laboratory was created in connection with the Council on Pharmacy and Chemistry. There was a firm, for instance, a prominent firm, which came out with a proprietary remedy said to be one-fourth as toxic as chloral. It gave a beautiful chemical formula. If a chemist had just taken the privilege or had been given the opportunity to use a lead pencil, all that would have been necessary for him to have done would have been to draw four straight lines, dissected that formula, and there would have been one molecule of chloral and three separate molecules of glycerine, all hoked up by one of an artistic rather than a scientific temperament. The product was one-fourth as toxic as chloral; one-fourth as active as chloral; it was a 25 per cent solution of chloral in glycerin. Just as the profession or any science advances, so does quackery advance in its cleverness. The chemical laboratory, there-

fore, was created primarily to expose the proprietaries that are sold to the profession.

It was also found, however, that before a drug can receive recognition, it is necessary that there should be adequate standards drawn up concerning that drug. If the drug is not a pure drug, if its activity varies, of course it is difficult for one to obtain proper results from different batches of the same drug, or it is difficult to obtain comparable results from different localities. Today one of the major functions of the chemical laboratory is the evaluation and standardization of new drugs. The drugs today are so complex in composition that they differ a great deal from the drugs of twenty-five years ago. Probably the greatest influence that the chemical laboratory has had is the fact that it has made directors of pharmaceutical houses appreciate the necessity of their having scientific men on their staffs. Without seeming at all boastful, I think it can be stated that before the war the chemical laboratory of the American Medical Association was much better informed than any pharmaceutical house or scientific staff in general. During the war the American houses saw the necessity of doing what the Germans had done, of manning their laboratories with competent men. If a pharmaceutical house has a staff that, scientifically speaking, is excellent, you can appreciate the greater difficulty for the chemists of the American Medical Association to attack these problems of new chemical compounds, and yet with that difficulty it so happens that last year there was not a large pharmaceutical house which did not at some time or other receive criticism of the chemical laboratory concerning its product as a result. Products have been held up until the chemistry could be worked out; products have been rejected and never put on the market.

This, gentlemen, is the work that the chemical laboratory is doing concerning which we can't make much noise, so to speak.

It sometimes happens that we wonder just how much work we should do in testing these drugs. One would think that a solution of dextrose in water would be a preparation which would not require chemical control. But as you know, dextrose ampules are probably one of the most widely sold items in any pharmaceutical house. We have examined probably between sixteen and eighteen different

brands of dextrose ampules, and we have not yet found one house which submitted an ampule that on first examination was what it was claimed to be. Some of the ampules varied and had more than claimed, and others had less. Some firms forgot all about the matter of specific gravity. Other firms put in buffers, but did not standardize their buffers. Others did not appreciate the fact that the PH. of the solution, as well as the titratable acidity, particularly when used in intravenous therapy, must be kept within well-defined limits. The other side of the picture that is bright, however, is that the product did not get on the market until after the laboratory had passed on it, and the result is now that if the users of dextrose ampules confine their products to those described in New and Non-Official Remedies, they are pretty certain to get a product that is reliable.

Manufacturers are glad to have suggestions. In instances, they appreciate that when they went from a laboratory to a factory scale, they slipped. They have learned a lesson, and they are watching, and if there is anything that we would like for the medical public to keep in mind, it is to confine their prescribing to drugs which are accepted. The average physician naturally is not competent to pass on the chemistry or pharmacology of drugs; he hasn't the time to look up the literature. That was the reason that this competent body of the Council on Pharmacy and Chemistry, together with the aid of the chemical laboratory, was created. Is it not the logical and sensible thing, therefore, for the busy practitioner, particularly the man who is not an experimenter in medicine, to use only drugs after they have been accepted by the Council on Pharmacy and Chemistry? When he is asked to use a new drug, his reply should be: Is it in New and Non-Official Remedies? If not, why not?

New and Non-Official Remedies is a book with which I wish everyone would get acquainted, particularly the secretaries of county medical societies. It is revised annually. It contains a description of the drugs, tersely stated, the actions, usage, and dosage, followed by what is most essential, the standards by which the drug is controlled. It is really a contract between the American Medical Association and the manufacturer that this drug will be sold and advertised only according to the claims of this book, and is to be manu-

factured and assayed in accordance with the standards that follow in fine print.

The Council on Pharmacy and Chemistry also published a little book with which most of you are familiar, *Useful Drugs*. This is for everyday practice. Instead of having a *Pharmacopeia* so thick and a *National Formulary* so thick and then *New and Non-Official Remedies* so thick, out of this book (*Useful Drugs*) the average practitioner can get every drug he needs for at least 300 out of the 365 days in the year. The state boards which examine in *materia medica*, confine their examinations in *materia medica* to those things described in that book.

On the twenty-fifth anniversary of the Council, something has happened to gratify us very much. The American Dental Association has formed a Council on Dental Therapeutics, patterned almost exactly after our Council on Pharmacy and Chemistry. And I think it is a tribute to the Council on Pharmacy and Chemistry that another organization did not see the necessity even to improve on the methods of procedure or the general scope of such a council.

Just before I leave the discussion concerning the laboratory: The laboratory analyzes preparations only when they have been receiving a considerable number of inquiries or when the product has been submitted to the Council on Pharmacy and Chemistry. It works for the Council first and it supplies, second, the chemical information which forms the basis of many of the articles that Dr. Cramp writes, and third, it aids the Journal in other departments in any way it can so long as it is concerned with chemical information.

It receives letters from laymen and physicians. To show you how the letters may vary from one extreme to another, there was a letter addressed to the Association here from a physician in San Juan, Porto Rico:

"I take the liberty to include a sample of hair of my daughter, thirteen years old, so that you be kind enough to refer it to the corresponding section. The microscopical examination of that hair I have found to show beading at frequent intervals, with occasional breaks through the surface of the shaft. I would like to know your diagnosis, and, if possible, line of treatment to follow. This hair was perfectly straight, but for the last ten or twelve months it has gradually changed into a kinked-like condition. I thank you gentlemen for whatever suggestion you

may be willing to make, and looking forward to the pleasure of your lines, I am."

I remember when Isadora Duncan wrote to Bernard Shaw congratulating him on his birthday, she said she had often thought how wonderful it would be if the two of them would have a son who would have the brains of Bernard Shaw and the beauty of herself. Bernard Shaw replied that he didn't think the suggestion was so hot; it would be just his luck for the son to have his beauty and the brains of Isadora Duncan. (Laughter.)

It just happens that it is my luck on one side to be a scientific man and on the other side to be more or less of a showman. In conferences of this sort I have never taken up the scientific exhibits, but in view of the fact that the American Medical Association. The applications are coming in from men of the best grade, and it is expected, at the rate at which inquiries have been made, that it will be necessary to pass very carefully on the applications and to eliminate a large number, not because the applications are undesirable, but because of space requirements, even though the exhibit hall is the largest we have ever had. That speaks well; that is as it should be. The more you can eliminate the better your scientific exhibit will be, naturally. It will not necessarily be a reflection on the man. It may be that some topics we may wish not to have exhibited this year will save them for another year. Naturally, the whole group on that topic will be eliminated without any reflection on the scientific character of their work.

The American Medical Association will also provide certain special exhibits. Under the chairmanship of Dr. Hartman, the fresh pathology exhibit will be presented this year. There is a group of local pathologists who are earnestly striving to get together material which they hope to be the best ever available for the purposes of demonstration. This material will be used for demonstration purposes by two groups of men; one group will be the local group who will demonstrate at all hours except when there will be guest demonstrators, and the guest demonstrators are a new feature as far as this exhibit is concerned. The guest demonstrators will be Dr. Francis Carter Wood on the pathology of cancer, Dr. Warthin on the pathology of syphilis of the heart and aort, Dr. Winternitz on the pathology of the lung and blood vessels, Dr. Ophuls of San Francisco on the pathology of nephritis, and Dr. Le

Count on the pathology of the brain, an A-1 group.

There will also be a special exhibit on fractures. It will be under the same efficient committee we have had before, except that the demonstrations this year will not only include the consideration of simple fractures, but will also take into consideration the matter of rehabilitation. That exhibit will be a little different this year in that people will be taken in groups, seven in number, and not permitted to stroll along aimlessly as heretofore; it will be progressive and it will be timed and each demonstrator will be given so much time to explain his subject.

The laboratory diagnostic methods will be continued for the third year. It was not expected that this would be exhibited more than two years, but such a tremendous interest was shown at the Portland session that it stimulated the committee on scientific exhibit to request this earnest group of men, who are non-medical largely, to exhibit again.

The fourth special exhibit will be that on varicose veins.

Besides that we have had the usual number of extra applications that bespeak the high character of the scientific exhibit in Detroit. I am sure you can assure your people that the scientific exhibit will be one of the features of the Detroit session.

There is a close co-operation between the sections. I hope that after the session is over you will feel that the scientific exhibit and the session as a whole has been well worth while.

Finally, if we here at headquarters, so far as the Council and laboratory are concerned, can be of service to you, if we can answer any inquiries, please do not hesitate to call on us; the laboratory and the Council are up on the fifth floor in the northeast corner, and we are looking forward with a great deal of pleasure to having you come around and inspect us and ask any questions you have in mind. (Applause).

Dr. Snyder: I have often wondered why that was called non-official remedies.

Dr. Leech: Official remedies are those that are described in the United States Pharmacopeia and the National Formulary, and that definition has been set by statute. Therefore, in order to differentiate those that have not been so standardized we call them non-official. For instance, the Pharmacopeia Convention will meet this year, in 1930, but the Pharmacopeia itself will not be issued until

1936. Since the issuance of the last revision of the Pharmacopeia there have been rediscoveries, new drugs brought out that are not proprietary, particularly from university laboratories, all that require careful standardization.

The best example that I can think of is ephedrine. Ephedrine is not in the Pharmacopeia, yet there has been quite a furor about ephedrine. Chemically speaking, ephedrine is a very difficult proposition because it is capable of having four isomers, only one of which is active. Therefore, there was a chaotic condition when ephedrine came on the market. Some physicians would get results and others would not; the drug was active to a certain extent in some cases and more active in others. It was into this situation that the chemical laboratory of the American Medical Association injected itself. We standardized ephedrine. It was a difficult proposition. The result is that every manufacturer of ephedrine whose products are in New and Non-Official Remedies is making ephedrine according to our standards. Furthermore, one firm said they could not follow our standards, and in the current phrase of the day we said, "That's just too bad." Six weeks later the manufacturer said that he was going to follow our standards. He said he was sorry he had to do it, in some ways, because he had to throw away forty per cent of his product. But you can see how vastly important it was for the medical profession that the laboratory came into the situation when it did.

Dr. Best: I wonder what the doctor can tell us about the standardization of pituitrin.

Dr. Leech: In the first place, if you don't mind my correcting the name you have used, pituitrin is a proprietary name of Parke, Davis & Company for their preparation. We here use the term "solution of pituitary."

There has been a good deal of debate on the standardization of solution of pituitary. I, not being a pharmacologist, am not competent to discuss the details of it, but I understand that it is in a satisfactory condition today. There was, I believe, some difficulty in using the Roth method at first, but in view of the establishment of the standardized powdered pituitary now furnished by the U. S. Public Health Service laboratories, with the aid of such excellent men as one from your state, Edmunds, the solutions of pituitary U. S. P.

as far as we have been able to gather are satisfactory.

Again we would like to suggest that you get away from the word "pituintrin" and use the words "solution of pituitary." If you do, it will help scientific medicine that much. Of course if you purposely want to specify the P. D. brand of solution of pituitary, then that is O. K., as pituintrin in an accepted brand, kept under careful control.

Dr. Langford: Does each new edition displace the previous issue?

Dr. Leech: No, it does not. It is about two-thirds old and one-thirds new. In other words, we accept products for a period of three years unless special provisions are made at the time that it might be for a shorter term or in case the manufacturer has not lived up to his promise in reference to advertising, in which case, of course, the action is rescinded promptly. It is a revision. Oftentimes the general articles are revised. It contains the articles which have been accepted since the revision of the year previous. It also has omitted from it those products concerning which the Council feels that there is debate about the therapeutic value. The Council in its evaluation of therapeutic evidence looks at it from a very broad standpoint. For instance, if a product has been in New and Non-Official Remedies six years and there has not been much in the literature about it, it seems self-evident that that is a product that probably is not worthy of further inclusion. Of course, what the Council wants to get away from is non-essential modifications or multiplications in materia medica. It does not want to hamper medical progress or to put hardships in the way of the manufacturer. It still is very careful to see that the interests of the manufacturer are protected so long as by so protecting those interests they are the interests which are for the best furtherance of medicine and for the public in general.

You all know as well as the Council does that if some of these things were put into the hands of an optimist he could conscientiously work himself up to the frame of mind that he would find dishwater and soap if sold under a coined name a pretty good remedy. What the Council asks is that the therapeutic evidence is being controlled.

If the Council feels it has a new product for rheumatism that is superior to the present remedies, it should take, say, 100 cases of rheumatism in an institution, di-

vide those hundred cases fairly into two groups, to one group give exactly the same treatment as the other group except for the new drug, one drug labeled A and the other B, and if B is the new product and it is really superior to the older drug, it should show itself so incontrovertibly that there would be no doubt about the therapeutic value.

Another thing, in an evaluation of evidence for a new drug, the first thing is chemical-mindedness. What is the product chemically? If you don't know that you cannot draw adequate conclusions.

The next thing is to know what its pharmacological action is, but the crucial test of therapeutic evidence is a therapeutic bedside clinical observation, and the Council is very mindful of the fact that bedside or clinical observations are by far the most important, providing they are made under adequate control.

Chairman Warnshuis: The next talk that we are going to have is on Public Health Education. Our House of Delegates in the classification of the responsibilities of state and county organizations has placed second our responsibility for public health. I am going to ask Dr. Dodson, Director of the Bureau of Health and Public Instruction, to talk to us now. (Applause).

Dr. John M. Dodson: Mr. Secretary and Gentlemen of the Michigan Society: I sometimes wonder if it wouldn't be a good thing, in groups like this, to give the audience a chance to tell whom they would like to hear and vote him up or down, as the case may be.

Quite some years ago a friend of mine illustrated the advantage of this plan at a banquet of a medical college. He was somewhat of a wag and a practical joker, and was the toastmaster for that evening. While we were engaged with the menu he came to my chair and said, "I'm going to call on you after the regular program."

"Oh," I said, "the program is too long already. Don't do any such foolish thing." But he spoiled my dinner, of course.

I saw him go to two or three of my friends, and so I said, "He's going to ask them, too."

The banquet dragged along, as those things do, and it came to be near midnight and the commuters from the suburbs had to leave. Finally the toastmaster rose and said, "There has been a desire expressed to hear from Dean Dodson about the elective system," which was a fad of mine at the time. He looked at his watch and

said, "The hour is late. We will put it to vote. Those in favor will say 'aye'." Well, of course there was the customary chorus of ayes out of courtesy. He said, "Those opposed 'no'," and these three gentlemen whom I had seen him speak to piped up, "No!"

He said, "The noes have it." (Laughter)

The Bureau of Health and Public Instruction was established in 1910. While requests were coming from the public for information about patent medicines and things of that sort, many other requests came for positive information. People don't want to know simply what they shouldn't do; they like to be advised what they ought to do. So the House of Delegates decided there should be a council, which was made, by the way, a bureau in 1923, with only a director reporting to the trustees, and they started on the work of seeking the medical and health education of the public. They used the newspapers, sending out articles from the Journal and other publication, rewritten sometimes for the reading of the layman. These were printed in a certain number of newspapers, not, I think, very widely, however, because the newspaper man gets so much of this sort of material that the great bulk of it goes into the waste basket.

They started the publication of a series of pamphlets written by excellent men for the lay reader, one on conservation of vision, one on cancer, one on the contagious diseases, and so on. They also established a speakers' bureau. Some 250 men in different parts of the country agreed to give talks on medical topics for the lay audiences, and notices were sent out of quite an elaborate program giving the topics and the speakers. For a short time the Bureau paid the traveling expenses, but later the traveling expenses were exacted from the local organizations seeking such speakers.

Some of you perhaps will recall that sermons or talks were arranged usually in the place of meeting of the American Medical Association on the Sunday before the opening of the regular meeting, and these were quite popular.

A certain number of posters were produced, not very many, and one of the important activities that the Council engaged in was co-operation with the National Education Association through a joint committee on health problems in education, which has continued to work until this time and has been, I think, a very important factor in the absolutely revolu-

tionary change that has taken place in the minds of the educational world with regard to the importance of health in any scheme of education.

Then in 1923, after a good deal of deliberation, the Association decided to publish a lay magazine on health, and *Hygeia* was established, which has prospered and we think improved and is doing a great work. It has at the present time a circulation in the neighborhood of 75,000, very largely, we are glad to say, among the people where it will do the greatest amount of good, that is the teachers and the schools.

We do feel that the profession has not been quite as generous in its support of this magazine as it ought to be. It seems to us that every physician ought to have a copy of *Hygeia* in his reception room, and ought to do everything in his power to see that it is placed in the public library, in the schools, and in other places where it will do the most good.

Among the other activities of the Association is the co-operation with other organizations. I have spoken of the National Education Association. One other is the National Congress of Parents and Teachers.

I am not going to discuss in detail all of the activities; they are mentioned in a slip which we will place here for all of you to take, and that will tell the whole story.

I should like, however, to speak of the work of this National Congress, especially in one direction. The National Congress of Parents and Teachers has had a remarkable growth in the last three or four years. It numbers now about a million and a half of parents in different parts of the country, and one of its very important activities is the summer round-up campaign of pre-school children, in which they seek to have every child who is to enter school the following autumn examined first in May and the parents advised to take that child to the family doctor for the correction of any defects which are found. The child is re-examined in September when it is ready to enter school, and note made of whether or not those defects are corrected, and the child is then 100 per cent ready to enter school.

They have cordially co-operated with the Association; they followed the lines which we indicated. They go direct to the county medical society and seek the co-operation of the group as a whole, and ask that the county medical society make selection of such physicians as are willing to serve as

examiners in these preliminary inspections.

I should like to urge that wherever that is done, the profession realize that this is an important move.

It is not expected that this will continue indefinitely. There is no reason in the world why the well-to-do parents of a child should not pay for that examination, but you have got to educate them to the need of it.

All through the ages children have been going to school without any such examination. The majority of parents believe their children are perfectly well. We can't expect them all at once to awake to the fact that this is a vitally important thing, and go to the family doctor or any general practitioner with a \$5 or \$10 bill in one hand and a child in the other. This is an educational proposition, and I believe one of the most effective and important methods of persuading people of the importance of periodic health examinations, not at the pre-school age alone, but throughout life. They have agreed to co-operate with that program.

A special activity of the Bureau of Health and Public Instruction is the promotion of this matter of periodic health examinations of the apparently healthy, and concerning that I should like to say a few words. At the meeting of the House of Delegates in St. Louis in 1922, the House of Delegates in St. Louis in 1922, House appointed a committee. The Association was committed to the promotion of this movement, and a committee was appointed to draft a blank for use in such examinations. That was presented in 1923 and adopted. A year later a manual of suggestions was prepared which gives instructions of a general sort as to how to conduct those examinations. An article has been prepared by Dr. Haven Emerson, who originally proposed this movement, for distribution to the laity, entitled "What Is a Health Examination Anyway?"

There has been a good deal said about this activity pro and con. It has been objected that it does not amount to anything, that people don't want it, that it just can't be put over. But I think the objections are mainly to certain mistakes that have been made by the sponsors of the movement. In the first place, too much stress has been laid on the so-called lengthening of the life span. As a matter of fact, we haven't any very conclusive evidence that such examinations as this will

lengthen the life span materially, and it isn't so important whether they do or not. The vital and important thing is that they should make the life, long or short, more healthy, more comfortable, more effective. Of course, the general opinion is that man hasn't very much control over the length of his life, that it is settled at the time he is born. Your own Professor Warthin has recently expressed that in his book. But that has been one of the mistakes.

Secondly, too much emphasis has been laid on the mere finding of physical defects. It is probably true that after the period of childhood, the number of defects found in the average individual may not be very large, they may not be so very important in connection with his health, but his habits and the conditions under which he lives and works are very important and they need to be looked after, as is called for in the blank, with just as much care and earnestness as the physical defects.

To my mind, the one great result of this activity is this: It brings the average layman into contact with the doctor, who becomes or may become his family health adviser and look after the health interests of that family from that time on, and that is a very important thing.

There isn't any question but that at the present time and in the future years to come the preventive side of medicine is going to grow more and more important, and the possibilities of the physician in aiding his clientele will lay very largely in the field of prevention. Of course, people will come to him as they have through all the centuries for relief from pain or from aches or for deformity or for accident, to be looked over and have that most fundamental thing done in any individual health program, a survey made of their condition. That ought to be encouraged.

I look to the time when the doctor will not only examine the members of the family in that way and do it at intervals, but when he will follow along with the children of that home, into the school, and become the health adviser in reference to school work.

Of course, the pediatricians are setting us a superb example in this regard. The practice of pediatrics has been revolutionized in the last fifteen years, and there are many men who devote themselves to children who are making more money and doing a great deal more work in advising mothers how to keep their children well than they are in taking care of them when they are sick. That ought to go on right

through the period of childhood, even through the school life. There isn't any question but that under the tremendous stress of pressure the teachers in the schools are doing a good deal of harm at the present time by subjecting children to undue stress. The family doctor ought to know about that; he ought to be familiar with what is going on in the schools. I would go a little farther than Dr. West went last night when he spoke of this and of the importance of having a representative of the society on the school board to report to the physicians in the county societies as to what is going on there. I would have every doctor in the community an adviser as to education and school work of the families which he serves, seeing to it that children do not undertake, for example, work in the direction of physical education, physical culture, for which they are not fitted; seeing to it that they are free from defects which hamper them in their work and that the work is not made burdensome. These children that bring home work and spend two or three hours on it every evening, young children, though that is not quite so prevalent as it was, are being done serious harm. It is the business of the family doctor to see about that and to protect against it.

In my judgment, if we can bring this about, we are going to save the family doctor. We hear a lot about the passing of the family doctor. There isn't any question that the lessening in the amount of contagious and other diseases that has taken place in the last twenty or twenty-five years and is going on still more, has taken from the doctor a good deal of work that he formerly did. There isn't any doubt but that the specialists are getting directly a good many patients who never get to the family doctor at all, which, in my judgment, is a great mistake, but it is happening. If he can become the family health adviser of the clientele that he serves, he will fill, in my judgment, a larger place and render a larger service than he ever did before. That is the importance of this movement.

There are a number of ways in which the movement is being advanced in different quarters. One of the best methods of getting at the matter was that adopted by the Queens County Society of Brooklyn in the early days of this matter. They devoted one or two evenings of discussion, participated in by men who had studied the matter, to the importance of the periodic health examination. Then they se-

cured the names of a hundred members who agreed to be subjected to periodic examinations by fellow-members of the organization who were competent. The defects found in those examinations were tabulated by the secretary, or a committee, and reported on at an open meeting of the society. Naturally, those reports got into the papers, too, and they were all amazed at the number of defects found and the number of physicians who supposed themselves perfectly well, who were found to be afflicted with defects that were more or less crippling.

In Wisconsin, some two or three years ago, the districts were organized for the purpose of promoting this movement, and one or more men were selected in each district who agreed to give demonstrations of how to conduct a periodic health examination and to stimulate the physicians in that district to increased activity in that line.

In New York City in the last weeks there has been going on a very important movement of the nature of a religious revival, I should say. The five district societies in the region of New York, the health office, the health organization of the city, and a number of private agencies, the tuberculosis association and the Life Extension Institute, and others, have combined in a period of special activity to stimulate the profession to the importance of this periodic examination of healthy persons.

I am a little suspicious about the durability of such a special spurt of activity as that; it is a little in the nature of a religious revival, and as I recall the days of my youth and call to mind some citizens of the town who used to be converted by one church or another every time there was a revival, and backslid almost as quickly as they were converted, I am always a little doubtful of the efficacy of that method. However, good will come out of this movement, undoubtedly.

In North Carolina a physician especially competent for this work has been employed by the State Board of Health to travel about through the state, devoting his time practically exclusively to stimulating physicians to take an interest in this movement, and demonstrating how it is to be done. I commend that to your consideration.

I should like to add, too, that in this movement, as in other movements for the medical and health education of the public, I think it is of the utmost importance that the physicians represented in the

county society and in the state society should be in intimate and hearty co-operation with the public health officials. These are people whom the public themselves have delegated to look after their health interests. They cannot do it effectively without the co-operation of the medical profession. On the other hand, the medical profession cannot get the best results without the cordial, sympathetic, intelligent co-operation of the health officials.

Among the activities of the bureau, I mention the publication of pamphlets. Here are some of them, such as you see. The physician can educate the public, of course, most effectively of all methods by conference individually in his own office or in the home. When he is discussing, for example, the pre-natal period, if he can hand to that mother, or tell her where she can obtain a little booklet especially directed to the pre-natal period, he can do her a great service. This is entitled, "A Child Is to Be Born," written in language that she can understand. We are prepared to furnish pamphlets of that nature. We have a complete list of the pamphlets of the bureau on display in the office below, and as you go around this afternoon we will be glad to call your attention to them.

Posters are also used, and I should like to pass about to you a folder describing and showing in miniature the infant welfare posters which were completed last year, a set of ten, suitable for posting at fairs, meetings of various organizations where mothers are assembled particularly. We think they are very attractive. This particular one calls the attention of the mother to the importance of consulting her physician at intervals during the period of pregnancy.

Another series is published in connection with the National Education Association by the joint committee on health problems. This has been in existence for some years, and at the forthcoming meeting of the joint committee, consideration is to be given to revision or replacement of these posters by new and more attractive and up-to-date posters. Those particular posters are useful for schools.

The slips to which I referred explain in brief what you have been hearing this morning, what are the activities going on at A. M. A. headquarters, what are the functions and purposes of the several groups. (Applause.)

Dr. Bryan: What have you done along the mental side?

Dr. Dodson: The joint committee pub-

lished, some four years ago, a document which was adopted by the National Education Association and goes to the teachers of the country, therefore, with their official endorsement, entitled, "Health Education." It is an outline of the basic considerations which should enter into the arrangement of the curriculum for health education in the schools. That has a chapter on mental education.

That report, by the way, is being revised now, and one of the things that is being given special consideration is the chapter on mental education. There is no doubt but it is of great and growing importance. We are being told, undoubtedly truthfully, that a great deal of the mental abnormalities and disturbances which we see in adult life arise from the improper handling of children. If we can put ourselves in the way of educating parents to do the right things instead of the wrong things, it should have a very good effect.

Chairman Warnshuis: Under the broad subject of your American Medical Association, Dr. West is going to cover some of the topics that were listed in the program, the speakers were either called away by business of the Association or could not be present.

Dr. Olin West: Members of the Conference: I want first to pass on to you expressions of regret from Dr. Woodward and Dr. Fishbein that they were not able to be here today. Both are away on official business.

I could not attempt to cover in the time at my disposal all of the activities of the American Medical Association, and will be able in such time to tell you a very small part of the story. The association, as you may know, was organized in 1847 at a convention held in an eastern city for the express purpose of attempting to improve the conditions of medical education. That purpose has never been out of the minds of the officers and members of the association, and we are still working at that same old task to this good day. Since education is a continuing and eternal process, I suppose that as long as the American Medical Association exists it will always bend its effort to further improvement in medical education. The improvement that has taken place has been enormous, and has had far-reaching effect, but there is still work to be done.

Dr. Bruce's talk to you about post-graduate education last night brought to mind some of the most important problems in medical education that are not capable of

quick solution and that will probably demand our very earnest consideration for a number of years to come.

There are, as he told you last night, still in existence institutions which are somewhat comparable to the old-fashioned diploma mills. The indications are that most of those concerns will soon disappear from the map if the rank and file of the medical profession will wake up to the situation and if our universities and our medical organizations will give men in the everyday practice of medicine the opportunities that they ought to give them for getting helpful instruction of a practical kind.

Some of our universities have turned out men with their degrees and have forgotten them until the time came when they needed to build a new building or to endow some sort of a new movement, and then they could always find them all. I think the universities owe a duty not only to their own graduates, but to the entire medical profession, to carry instruction to them as long as they live and as long as the universities live. Medical societies have been watching with great interest the activities of the Michigan State Medical Society and the medical schools in that state and the splendid experiment that is being tried, to carry helpful instruction to the practicing physician where he lives. Of course, some of our highbrows don't approve of that sort of movement; they don't think there is any instruction worth while that is not done in the midst of laboratories and with all the trimmings of super-science, but my opinion, which is worth just what my opinion may be worth, is that the work that has been done by some of our state societies, and notably by the Michigan State Medical Society, in this field has been quite worth while and that it ought to be carried on and extended.

The American Medical Association, having been organized for the purpose of improving educational conditions, has always stood from the very beginning for the promotion of medical science and of the art of medicine in every possible way. To carry out that purpose we must not only improve our medical schools, but we must make it possible for the rank and file of the profession to get information concerning scientific medicine, the art of medicine, the economics and the social relations of medicine. For that purpose the American Medical Association has long provided for its members several periodicals, the constant aim for which has been to make them

better with each succeeding year. We are rather largely engaged in the publishing field. At the present time, in addition to the weekly journal known as the Journal of the American Medical Association, with a circulation of approximately 95,000 each week, the association is publishing eight other scientific journals, most of them known as "Archives:" the Archives of Surgery, the Archives of Internal Medicine, the Archives of Otolaryngology, and so on and so on, and one of them known as the Journal of Diseases of Children because the word "archives" in the pediatric field had many years ago been appropriated by another publication.

The Journal of the American Medical Association and these other scientific journals are not run in any haphazard manner. The work of their publication commands the interested, the active, the laborious attention of many of the greatest minds in medicine in the United States. All of our special journals, as we call them, are published under the direction of editorial boards composed of outstanding men from all parts of the country. If any of you think that the duties of these men are not extensive and laborious, you are tremendously mistaken. They give hours and days and weeks of devoted service without any compensation whatever, in order that they may contribute to the progress of scientific medicine. Right there I think is to be found the secret of the strength and success of the American Medical Association—in the willingness of the greatest men in medicine to contribute of their time and their strength and their knowledge for the benefit of the entire medical profession, and, of course, therefore, for the benefit of mankind in general.

This meeting here is an earnest of the splendid spirit that exists among the men who realize what it means to be a member of a profession. Your councilors came here yesterday and worked hard all day; you were here yesterday and are here today giving of your time; you get nothing out of it except the gratification that may come to you for having done what you believe to be your duty for your profession. The American Medical Association commands the willing services of dozens, even hundreds, of the outstanding men in the profession in the United States, and I say again that in that fact is to be found the secret of the success of the organization.

I wish you all could come here and see the official bodies of the American Med-

ical Association work. I have seen the Judicial Council start to work at nine o'clock in the morning, work all day, and until two o'clock the next morning, with two little thirty or forty-minute intervals for lunch and supper, and then come back the next day and do the same thing. I have seen the Board of Trustees, extremely busy men, come here and spend three days, occasionally four days, in the most laborious work, trying to give their most conscientious attention to the affairs that are of direct interest to every individual physician in the United States, and trying to find solutions that will reflect the greatest benefit on all physicians.

You know, we occasionally get very discouraging letters that sometimes make me wonder if it is all worth while. For instance, yesterday I had a letter from a man who said, in effect, "I have been a member of a medical society of the American Medical Association for more than forty years, but I am through. Some gang out here in my state has done so-and-so. Evidently that have no more use for me. (He didn't agree with them.) I'm through. I'll never have anything more to do with my state society or my county society or the American Medical Association and the fact of the business is that in all my career as a physician I can't put my finger on one single benefit that I have ever received from medical organization."

That is an astounding statement to come from a man with the standing of this man, and it makes one wonder. But when I get through wondering about it, I always put my finger on the fault, and it is in the man, of course. But when we get a pile of communications like that, dumped in in numbers within a few days, sometimes, it makes us wonder whether it is all worth while. But when, within the next three or four days or week we will probably get 100 or 500 or 1,000 letters from men who know what it is all about, who are willing to give and take, and to keep on working in the interest of the organization, and in the interest of medicine, then we decide that other things don't amount to so very much, after all.

I should like to tell you just a little bit about how the Journal of the American Medical Association and its other publications are handled. More than 3,000 sometimes 3,600 contributions are offered for publication in the Journal a year. It is physically impossible to publish more than about 600 papers. We are under the necessity of printing most of the papers that

are read at our annual sessions before the various scientific sections, and they number approximately 300. You will realize at once that it is absolutely necessary and unavoidable that most of the contributions offered for publication have to be rejected, but it is not done in any haphazard manner. Every article that is submitted for publication is given the most careful scrutiny and is subjected to the opinion of more than one individual. In many instances, if there is much doubt about the thing at all, the papers are submitted to two or more of the most scientific men in the United States, whose opinions are secured and decisions are made on that basis.

We occasionally get a letter from an individual who says: "The Journal of the American Medical Association does me no good. It is over the head of the average practitioner." I am inclined again to put the fault on the man who writes such a letter, because the chances are that he has not properly examined the content of the periodical. I think that any physician who will really examine the Journal of the American Medical Association will find in any number of it much that he can use to his own benefit in his everyday practice. At any rate, the everlasting aim of everybody in this organization who helps to make the journal is to make it helpful to the individual practitioner of medicine, and thereby to do our bit toward making every physician in the United States a better physician, which is the greatest thing that any medical organization can attempt.

There is a simple formula which, if it were practiced to the fullest possibilities, would eliminate many of these so-called problems that are agitating some minds—"Deliver the goods." There is nothing that can take the place of scientific medicine or that can hurt scientific medicine if its every practitioner will live up to that formula. That is rather an idealistic consummation to wish for, but it is one to strive for. If I know the minds of the men who are doing the work of the American Medical Association, it is the one consummation that they keep constantly in view, the one vision that they have for American medicine—that eventually every registered physician in this country will be so qualified that he can and will render adequate, scientific service.

We have our various councils and standing committees, as the Council on Pharmacy and Chemistry, about which Dr. Leech talked this morning, the Council on

Medical Education, the Council on Scientific Assembly, the Judicial Council; and then we have our bureaus, such as the Bureau of Health and Public Instruction, the Bureau of Legal Medicine and Legislation, the Bureau of Investigation, and our various departments, the library and others, all of which we hope you will see today before you leave the building. We shall be very greatly delighted if you will ask questions wherever you go in this building, and that you will get yourself a convincing answer to any question that may arise in your mind concerning these departments and their work. We are more anxious than anybody else can be that the members of our association shall be properly informed about the association, about its operations, about what it is doing, what it is trying to do, how it is trying to do it, and why. There is nothing in this building, from the roof to the foundation stone, that anybody wants to hide from any member of the American Medical Association. It is *your* Association. I wish we could make every physician in the United States who belongs to it, feel just exactly that way, that it is *his* Association. As a matter of fact, he, the individual physician, is the American Medical Association. When he gets in his office by himself, he is the American Medical Association in his office, just as the Michigan State Medical Society is the American Medical Association in Michigan and your county medical society is the American Medical Association in the county. It is for you, for your individual benefit, and for the collective benefit of all physicians, and, through them, for the benefit of mankind, that the American Medical Association exists and carries on.

Dr. Leech told you about the work of the Council on Pharmacy and Chemistry, composed of seventeen outstanding scientific men of the United States, which means seventeen of the outstanding scientific men of the world, for I am one of those who believes that there is no better product in all the universe than the best product of medicine in America. I see Dr. McLester has come in here, a member of one of our councils, from down in my part of the country. I found out that my medical profession at home was just about as good as anybody's medical profession. As a matter of fact, I don't know where there is a better. I sometimes think we have inferiority complexes and that we don't consider ourselves to be quite as good as

we really are, and that if we just had the backbone and conceit, if you want to call it that, to really believe in ourselves (and if you don't believe in yourself you have no business in the practice of medicine) we could do a good many things for ourselves that we send to somebody else to do.

Dr. Leech told you something about proprietaries and about how the Council has labored for all these twenty-five years or more to protect the medical profession and the public against exploitation by unprincipled manufacturers and by some manufacturers who may be honest but who don't know what is involved. But I must tell you that the biggest aid (I hate to say this, but I am convinced of its truth) that these manufacturers who are not observant of all the principles that ought to be observed, have received, has come from the medical profession itself. Do you know that many of the remedies that are in common use that are bought over the counter by the public were introduced to the public by the medical profession, and that the minute they had accomplished their introduction, the manufacturers of some of these products have told the medical profession to "go to" and have reaped the benefit of the work that the medical profession did for them in introducing products for which they now make unjustified claims?

When you go home, go into the medicine room of your hospital, whatever you may call that room, and see what is on the shelves and in the drawers. Nobody but the medical profession has control of that situation. I fear you will find all sorts of proprietary remedies, some of which belong in the status of so-called patent medicines, many of which have been exposed as having made fraudulent claims or as having been not what they are claimed to be by our Council on Pharmacy and Chemistry. Information about them has been sent to you through the Journal and in other ways, but many of our own members are still using those things, even though they don't know what is in them.

It is a little bit discouraging for the men on that Council. I dare say there isn't a man in this room who can mention the names of one-half of the members of the Council on Pharmacy and Chemistry, but those men have given hours, days, weeks, months, years to your interests, protecting you and the public from unscrupulous exploitation by certain manufacturers, and the profession is playing

into their hands, rather than upholding the hands of scientific medicine, by prescribing indiscriminately all sorts of so-called remedies that are good for nothing in the world except to put money in the hands of their makers. Think it over. It is a serious proposition, and it is one that your society should think about.

Last night Dr. Corbus talked to you about a letter that an interested minister in his community, I take it, had sent out to physicians, submitting a number of questions to them, the answers to which he wanted to use as the basis of a sermon to be offered to his congregation in an effort to be helpful to them and to give them the right sort of information concerning what they might expect from medicine, and to tell them something about public health. He told you how at least one physician wrote back to this preacher and told him that it was none of his business, that he had better preach the gospel and attend to his own business. That sort of answer from an individual physician from a county medical society is the thing that makes the other fellow make it his business, and that attitude will tend more than anything I know of to destroy the helpful influence of scientific medicine. If I had been that doctor and had felt that that was none of that preacher's business, I might not have answered his questionnaire, but I would have gone to see him and talked the thing over with him; I would have found out whether he was sincere and wanted to get out the right information, and I would have given him all the help I possibly could have given him.

These organizations that some of us have refused to have anything to do with because their programs are wrong, are here to stay; they are going to stay whether you do or don't. If their programs are wrong, let's try to help get them right. There's nobody who can tell them the facts about medicine except the medical profession, and as I see it, the duty of the organized medical profession is to try to tell them the facts and to try to get their programs right. If you can't do it this week, try it again next week; if you can't do it next week, try it again next month and next year, and keep on until you do get it right. Of course, you couldn't ever convince the American Medical Liberty League of anything, but you can convince a Rotary Club or a Kiwanis Club or some other civic organization that has no selfish interest to serve; they are inter-

ested in their communities, and the medical society should be interested enough in the community to try to help every organization in it do the right thing for its community in matters of health and everything else.

The American Medical Association has its scientific publications, it has its publications for the lay public. The state medical associations have their journals, at least, most of them have. The county societies have their bulletins. Within the last year or so I have seen two splendid articles in a little magazine that comes to your desk each month as regularly as the month rolls around, describing some of the work of one of the best county medical societies in the United States. Those articles were never offered to the Bulletin of the American Medical Association. In so far as I know they were never offered to the journal of the state medical association to which this county society belongs. But they were sent to an independent publication that is sent to you by some advertiser who pays for the edition. It has some very interesting stuff in it, and it always will have some interesting stuff in it if our own organizations are going to supply the stuff instead of putting it into their own publications where they ought to put it so it will be for the benefit and information of their own membership.

Every member of the American Medical Association ought to try to inform himself first about what his own county society is doing and wants to do and how it is trying to do it, and then about his state society and what it is trying to do and why and how, and then about the American Medical Association. It ought to stand for the programs of those fundamental units in medical organization in the United States, and it can't stand for those programs if it is going to give comfort and support to every publication and organization that somebody happens to think about starting.

I have no hesitancy in saying, gentlemen, that there is danger in the existence of so many independent medical organizations. Some of them are doing very good work, but it may be that others of them are operating at the expense of the fundamental organization of medicine in the United States. We have "colleges" and "convocations" until you can't keep up with them, "institutes," "societies" and "associations" and God knows what all, some of which are interfering, designedly or not, with the absolutely fundamental

units of organization in the United States. And our own men make them.

As I see it, our first duty is to our county society and our state medical association and our American Medical Association. Before we affiliate ourselves with other organizations we ought to be very sure that there is a real, worth while purpose behind them and that they can and are determined to make distinct contribution toward the promotion of medical science and, if you please, for the material benefit of the medical profession. That is not a selfish wish to have, because I want to tell you that the material benefit cannot be lastingly severed except to the benefit of the public.

We are in an unfortunate situation, when there are a dozen voices or fifty voices speaking for medicine. There ought to be one great voice speaking for medicine.

I have no objection whatever to the organization of any medical society that can accomplish anything worthy that cannot be accomplished through the county medical society, the state medical association and the American Medical Association. But what is that thing? Why can't it be accomplished? If it is worth doing, there isn't anything that can be done for medicine that can't be accomplished through the fundamental organizations that we already have. If we are not doing it, let's get busy and find a way to do it.

The Bureau of Legal Medicine and Legislation is doing what we consider to be some very constructive work. This bureau is trying eternally to lessen the harassment that is imposed upon physicians by unnecessary governmental rulings. It is not an easy job. You don't hear much of it, but we are always at work at it and have succeeded, to some extent. We believe that these rulings should not be made until the medical profession, whom they most affect, has been given an opportunity to be heard, to the end that regulations that hinder the practice of scientific medicine shall not be promulgated.

I said last night, and I believe it firmly, that we have had too much legislation. We have almost shut ourselves in with legislation, designed for the protection of the public, that we have proposed and helped to pass, until we find it difficult to render our services to the best possible advantage.

My word of caution with respect to medical legislation is: Don't be in a hurry with your legislative program. Study it,

study it, study it, talk about it, get expressions from experienced men in legislative fields and otherwise, and be sure that you are right before you put any sort of bill into any legislature. Medical laws that were written and passed by the medical profession, with thoroughly unselfish motives for the protection of the general public, have been declared unconstitutional, because they were prepared in haste and without proper advice. In a few instances they have defeated the very ends they were intended to serve. It was hurry, it was ill-considered action that brought about that situation. Ill-designed legislation or ill-considered legislation is practically always dangerous. The legislative program of every society ought to be very carefully considered, whether it be the legislative program of the county society in a city council or in a county court, or that of a state or national society in a state legislature or in Congress.

Dr. Fishbein was going to tell you something about the publications of the Association, but I see I am not going to have time to talk much about that. He was also going to tell you about our library and its service. When I came to the American Medical Association a little more than seven years ago, we had a personnel of three in our library. There are today, I believe, twenty-six in the library, and the cry is for more help. Our library is a library of current medical literature and we are trying to build it up and perfect it. My recollection is that some seven hundred periodicals now come into the library. We have a working arrangement with other libraries in Chicago and outside. We have been trying to develop plans that would make the work of this library useful to all physicians. For a long time we have maintained a reference service, and a lending service. But we found that Brother Bill Brown out in Nevada, who left home last Sunday morning to see a patient and hasn't got back home yet, didn't get much good out of references because there wasn't a library within 500 miles of him. We wanted to help Dr. Brown, so we are developing a library package service which is available to any member of the association. We are now sending out, I think, about 2,500 packages a year. It is an expensive proposition, but if it is as helpful as we hope it is, that is all right. The board of trustees of the American Medical Association doesn't mind any reasonable cost of any service if they are convinced that that service will be helpful to

the membership of the association and for the advancement of medical science. A nominal charge—twenty-five cents, to be exact—is made for each package. The rules require that the package must be returned after six days.

We are having some difficulty with these packages. It happens, and it seems to me that it happens only in cases where they are the most valuable, that packages get lost. We will send a package out to some good fellow and he doesn't return it. We write to him and we don't hear from him. We keep after him, and finally he says: "I sent your darned old package back, you ought to have had it a long time ago." But it doesn't come back. In the meantime there are fifty other men in various parts of the United States who want that package. There are certain packages that are in such demand that it is not possible for us to get enough to meet the demand.

We want this service to be helpful to your membership, and while we are not advertising it much because if we advertised it too extensively we would be overwhelmed with demands that we couldn't meet, it is gradually being improved and perfected. Our facilities are being increased and we hope within a few years to be in position to meet any demands that may be made upon us. We will be delighted for your members to use this service.

Of course, it is not possible for the Association to render individual service of certain kinds. For instance, we are constantly getting letters from men who have been threatened with malpractice suits who want us to send Dr. Woodward out to defend them. Well, I'm sorry, but we can't do it. We are constantly getting letters from men who want us to make the most expensive and extensive investigations of all sorts of questions, legal and otherwise, that we are not in position to make, things that require the most complex technical investigation by lawyers or engineers or somebody else. We are sorry we can't do that, but we can't. But there are many services, somewhat of that kind, that the Association does offer to the state medical association or to the county medical society and, through those bodies, to their individual members.

In behalf of the board of trustees and in behalf of our personnel here, I want to extend to you again our sincere thanks for the honor that you have done us in having your meeting here this year. We have felt

complimented that you came back a second time. We are anxious that your county societies shall know all about the American Medical Association, and that you shall know what you want to know about it. We want you to go over this building and see anything that you want to see. Ask any question you want to ask. If we can't give you the answer now, we will try to get it for you; we will do our best.

I am especially grateful to you for your courtesies to me. (Applause.)

Chairman Warnshuis: As Dr. West has said, the Association here is at your service. The men who have talked this morning have just tried to tell you a few of the things that are being done. I am sure that not a single secretary here could spend his time to better advantage than by going through this building and visiting these various departments and seeing some of the things that you have not been told about.

Dr. West might tell you about the biographical department in which you are recorded and in which they have more intimate information about you than you may think they have. I am reminded of the instance of one man who went on one of these tours and asked to see his own envelope, and when he went through it he said: "My God, you know more about me than my wife does."

As Dr. West has said, that which the A. M. A. is doing, your state society is trying to do in its limited field, and in its humble capacity the office of the state society is at the service not only of the county secretaries, but of every member in the State of Michigan. We regret that sometimes things that you want to know and wonder about, you don't just sit down and drop us a line and ask us, because sometimes we can give you the lowdown that will change the aspect of a situation markedly when you have the full information.

Dr. Addison: Several members of our society have lately had a hobby of reading detective stories. On a couple of occasions we have brought in Cabot's case records and have gone over them like a detective story. Is there any other thing comparable to those case records that might be even more interesting?

Chairman Warnshuis: Only this package library, so far as I know. I just want to take the opportunity here to impress upon you the problem you men have in getting speakers for your scientific programs. It is a difficulty, a trying prob-

lem. As was remarked last year and has been reiterated time and time again, the county society is practically the proving ground for our coming medical speaker and lecturer and participants in our programs. It would be a splendid thing if you, as secretary, if you are getting up the program, or your program committee would designate from among your members certain ones who are to read a paper or to present a discussion at your meetings, and then when the subject is assigned to him, let him write in here to the library of the American Medical Association and get a package on that subject, which, as Dr. West has described to you, will contain the latest and the best and the most reliable information you can get upon that subject, that has appeared in the current literature of this country and of the world. He can have that for a week for the cost of twenty-five cents, plus the return mailing cost. That will give him an opportunity to make a review or an abstract and present that at the county meeting at a round table discussion. I feel you will have a scientific program that will be of intense practical value to each one of your members if you do that.

Dr. West: Your own case reports would be a darned sight more interesting than Cabot's. I happen to know of a county medical society with a small group, eight or nine men, who had the Cabot reports. Their meetings for months were given over to consideration of the Cabot reports. Finally a fellow in the crowd said, "Look here, let's get our own reports and work up our own cases as well as we can, and then let's compare our own cases after we have dissected them here with some of the cases that have been handled by Dr. Cabot." Much to their surprise they found that it was quite as interesting to them. It developed their ability to use their senses in the diagnosis of diseased conditions. Your own case reports can be made just as interesting as anybody else's.

Mr. Burn: I feel we should get in the record a vote of thanks to Dr. West for his very fine talk, even though he threatens to cut off my legs. I have another request from that same magazine for a future article, which I shall refuse after that remark. We should also thank the other doctors for their very fine, and to me very illuminating, addresses. Also, I feel that we should give a vote of thanks to the Council and to our Secretary of the Michigan State Medical Society for allowing us to be here. (Applause.)

Dr. Best: I don't know whether I am a Fellow or a member of the medical association. I subscribe to the Journal, and the thought came to my mind that perhaps that might be the case with a great many of the doctors. Is there a way we could find out?

Chairman Warnshuis: Just one minute downstairs or look in the directory of the A. M. A., and if you have a cross back of your name you are a Fellow, if you are only in capitals you are only a member. If you are not in capitals, you are not a member of the county, state or American Medical Association.

You can get that information either by asking me or the membership department of the A. M. A.

Dr. Snyder: How do you know if a man is a Fellow or just a subscriber to the Journal?

Chairman Warnshuis: I would have to depend upon the information secured from the A. M. A. subscription list. I think there are something like 500 or 600 men in Michigan who subscribe to the Journal but are not Fellows.

Dr. West: Within a week I have had a letter from three men who by all the rules ought never to have been admitted to membership in any decent medical society, but they have been admitted, and they have written in for fellowship in the American Medical Association. They can never get it, but, of course, if we are going to make the rule apply to one man we have to make it apply to all.

We will be glad to furnish any secretary with a list of the Fellows in his membership.

Dr. Wickliffe: I want to say a few words in appreciation of what I have gotten at this meeting. This is my second meeting of secretaries. When I saw the same men on the program to speak to us, I wondered what we would get. As long as Dr. Fishbein is not here, I can say in compliment to the speakers that they get bigger and better every year.

Chairman Warnshuis: When you go home, make it a point to tell what you have seen and heard here, to your members. Those of you who are issuing a bulletin, take the Journal that contains these transactions, and in each issue abstract a paragraph or a couple of paragraphs of the things that Dr. West has told you and the way he has told it, of the things Dr. Dodson and Dr. Leech and the others who have talked have told you, and pass those things on to your membership. That will

give your members an insight into what organized medicine is doing.

. . . The meeting adjourned at twelve-thirty o'clock. . . .

ATTENDANCE AT MEETING OF MICHIGAN STATE
MEDICAL SOCIETY COUNTY SECRETARIES' CON-
FERENCE, AMERICAN MEDICAL ASSOCIATION
HEADQUARTERS, CHICAGO

January 23, 1930

Dr. Kathryn M. Bryan, Manistee—Manistee County Medical Society.

Mr. William J. Burns, Detroit—Wayne County Medical Society.

Dr. J. F. Carrow, Cadillac—Tri-County Medical Society (Wexford, Kalkaska, Missaukee.)

Dr. Clarence E. Toshach, Saginaw—Saginaw County Medical Society.

Dr. B. R. Corbus, Grand Rapids—Vice Chairman, Council of Michigan State Medical Society.

Dr. Robert J. Douglas, Muskegon Heights—Muskegon County Medical Society.

Dr. Don H. Duffie, Central Lake—Northern Michigan Medical Society (Antrim, Charlevoix, Emmett, Cheboygan.)

Dr. D. W. Fenton, Reading—Hillsdale County Medical Society.

Dr. L. F. Foster, Bay City—Bay-Arenac-Iosco Counties Medical Society.

Dr. B. F. Green, Hillsdale—Councilor.

Dr. T. Y. Ho, St. Johns—Clinton County Medical Society.

Dr. D. P. Hornbogen, Marquette—Marquette-Alger County Medical Society.

Dr. Harry B. Knapp, Battle Creek—Calhoun County Medical Society.

Dr. C. A. Neafie, Pontiac—Oakland County Medical Society.

Dr. Joseph N. Scher, Mt. Clemens, Macomb County Medical Society.

Dr. E. F. Sladek, Traverse City—Grand Traverse-Leelanau County Medical Society.

Dr. L. M. Snyder, Lansing—Ingham County Medical Society.

Dr. George F. Swanson, Newberry—Luce County Medical Society.

Dr. L. W. Switzer, Ludington—Mason County Medical Society.

Dr. Theron S. Langford, Ann Arbor—Washtenaw County Medical Society.

Dr. Thomas P. Treynor, Big Rapids—Mecosta-Osceola Counties Medical Society.

Dr. Martin Tweedie, Sandusky—Sanilac County Medical Society.

Dr. B. Van Ark, Eaton Rapids—Eaton County Medical Society.

Dr. W. E. Ward, Owosso—Shiawassee County Medical Society.

Dr. F. C. Warnshuis, Grand Rapids—Secretary, Michigan State Medical Society.

Dr. T. P. Wickliffe, Lake Linden—Houghton-Baraga-Keweenaw Counties Medical Society.

READ ORDER BLANK IN THIS ISSUE FOR MEDICAL HISTORY OF MICHIGAN.

BRANCH COUNTY

On January 28, 1930, the Branch County Medical Society held its annual meeting, at which Dr. Samuel Schultz was elected president and Dr. A. G. Holbrook was elected secretary-treasurer.

W. A. Griffith.

BARRY COUNTY

The regular meeting of Barry County Medical Society was held January 9. The following officers were elected:

President, Dr. Guy Huln, Hastings; Secretary-treasurer, Dr. K. S. McIntyre, Hastings; delegate, Dr. C. P. Lathrop, Hastings; alternate, Dr. C. S. McIntyre, Hastings; legal advisor, Dr. R. C. Swift, Middleville.

C. S. McIntyre, Secretary.

MANISTEE COUNTY

The Manistee County Medical Society met following a 6:30 dinner in dining room of Mercy Hospital, January 21, 1930, with the newly elected President, Dr. Homer Ramsdell in the chair. Discussions of the physician's duty to the community, his interest in civic matters and his responsibility in preventive medicine and the feasibility of the physician talking at P. T. A. meetings and other civic organizations constituted the program.

The Society went on record as approving the plan whereby the physician takes much interest in civic and also political matters.

A paper on the "Neuroses" was then read by Dr. Kathryn M. Bryan and discussed by the Society.

HILLSDALE COUNTY

The annual meeting of the Hillsdale County Medical Society convened at the Lantern Tea-room, Hillsdale, Tuesday, January 14, 1930 at 6:30 p. m. After an excellent dinner the President Dr. Bichtol called the meeting to order and Dr. Bower read a very interesting report of two cases of Malta Fever occurring in his practice, which was followed by general discussion. The society then proceeded to the election of officers for the year which resulted as follows: President, Dr. C. J. Poppen, Reading; Vice-President, Dr. J. L. Yeagley, Waldron; Secretary and Treasurer, Dr. D. W. Fenton, Reading; Delegate to State Society, Dr. G. R. Hanke, Ransom; Alternate Delegate, Dr. O. G. McFarland, N. Adams. Dr. Green then presented the names of Doctors H. S. Banning and Fred Kline of Litchfield, for membership in the Society. There being no opposition both were unanimously elected. It was moved, supported and carried that the Secretary be directed to send messages of sympathy in the name of the Society to Doctors Sawyer and Frankhouser in their bereavement in the death of Mrs. Sawyer and Mrs. Frankhauser, and a similar expression to Mrs. Atterbury of Litchfield in the loss of her husband, Dr. W. H. Atterbury. The Secretary-Treasurer then gave a statement of the finances of the Society for 1929.

SHIAWASSEE COUNTY

The Shiawassee County Medical Society held a very successful meeting at Memorial Hospital February 13. As usual, luncheon preceded the

meeting, which was called to order by President Watts and after the regular business was disposed of, which included an application for membership from Dr. B. B. Fair of Durand, the report of Secretary-Treasurer Dr. W. E. Ward was read by him which described a recent meeting of County Secretaries at the headquarters of the American Medical Association in Chicago. Doctors C. T. Foo and T. Y. Ho, of St. Johns, visitors and guests of the Society, were then introduced and Dr. Foo gave a very interesting account of medical conditions in China. Many of the so-called newer things in medicine today, he said, were old in China more than a thousand years ago, while there was, and is now, much superstition in medical matters, he declared. There is also a great deal of credit due the Chinese for ancient discoveries and practices.

Dr. Ho, who is secretary of the Clinton County Medical Society, spoke briefly of the Chicago meeting which he attended.

Dr. W. S. Bell of Elsie, Dr. J. S. Shoemaker of New Lothrop, Dr. G. B. Wade of Laingsburg, Dr. L. M. Bates of Durand, and Dr. G. T. Soule of Henderson, were the out-of-town members in attendance.

W. E. Ward, Sec'y.-Treas.

IONIA-MONTCALM COUNTY

The January meeting of the Ionia-Montcalm Medical Society was held at the Winter Inn, in Greenville, January 14th, with nineteen members present. The meeting was in charge of Dr. Bower in the absence of Dr. Weaver.

A paper by Dr. L. J. Schermerhorn, "Simplified Infant Feeding," was very practical and thoroughly appreciated. There was a general discussion by most of the members present; many practical questions were answered by Dr. Schermerhorn in closing.

Dr. Harrison Collisi, also of Grand Rapids, gave an excellent paper on some phases of management of obstetrical cases, stressing prepartal examination, treatment of abnormalities in delivery, and obstetrical anaesthesia; Nitrous Oxide, rectal ether, inhalation ether, and chloroform, in order of importance. He very much favored Nitrous Oxide over others.

A letter from Dr. Guy L. Kiefer, State Commissioner of Public Health, inviting the Society to hold a regular meeting as guest of the State Board of Health, was read. Moved that the invitation be accepted and the time to be arranged by the Society officers with Dr. Kiefer. Carried.

Dr. Carlton Webb Winsor of Belding, was elected to membership.

Moved that the dues of the Society be \$15.00 per annum. Carried. Meeting adjourned until February 11th, at Ionia.

John J. McCann, Secretary.

GRATIOT-ISABELLA-CLARE CO.

The January meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright House, Alma, Thursday, January 30th, with sixteen (16) members and two visitors for dinner.

After dinner President Budge called the meeting to order, the minutes of the previous meeting were read and approved. Announcements of the

February meeting were made. President Budge spoke feelingly of the death of Dr. E. L. Street, who was one of the 25 charter members of the Society organized in 1902, of whom only five now remain in the county. Dr. T. J. Carney, having been asked to prepare resolutions on the death of Dr. Street, read the following, which by motion were accepted.

Resolutions being attached to this letter.

President Budge then introduced Doctor Bruce H. Douglas, Superintendent of the Maybury Sanatorium, whose topic was "The Diagnosis and Treatment of Pulmonary Tuberculosis." The doctor sub-divided the diagnosis into four parts: History, physical findings, X-ray and sputum, emphasizing each of these in detail. A short time was spent on differential diagnosis, mentioning bronchitis, lung abscess, pneumonokoniosis, foreign body, asthma, mitral stenosis and tumors.

Treatment: Rest, fresh air, diet and contentment. As long as the disease shows any activity, keep the patient in bed. Additional methods of treatment are compression, phrenectomy and thoractomy. The progress of patients under each of these methods of treatment was illustrated by X-ray plates. The doctor's talk was listened to attentively, after which nearly every one asked him questions, which he answered in detail.

President Budge, on behalf of the members, thanked the doctor for his very interesting and instructive talk.

Meeting adjourned.

E. M. Highfield, Secretary.

RESOLUTION CONCERNING THE DEATH OF DOCTOR STREET

WHEREAS, In conformity to the Divine Will the physical person of our associate and fellow practitioner has been taken from our midst,

WHEREAS, His ever ready response to the call of the needy and deserving patient, has created around him an atmosphere of dependability,

WHEREAS, The doctor's end was unquestionably hastened through this faithful devotion to his work in spite of declining health,

WHEREAS, His sense of responsibility as an example to the rising generation was exemplified in his upright character; was manifest in his square dealings with his neighbor, his faithfulness with his church activities, his deep respect for the sanctity of the home in all its ramifications,

WHEREAS, Dr. Street's work was a striking example of that relationship which endeared the patient to the family doctor, therefore be it

RESOLVED, That the Gratiot-Isabella-Clare Society deeply regrets the passing of this member and that the sympathy of the Society be extended to the family and that the above resolution be spread up the minutes of the Society and a copy of the same be sent to the family and also the Public Press.

Gratiot-Isabella-Clare Medical Society,
E. M. Clark, Secretary.

SAGINAW COUNTY

During the past year the Saginaw County Medical Society has had programs of high quality. Two speakers of national repute, Dr. Dean Lewis, Professor of Surgery at Johns Hopkins and Dr. Joseph Collins, Director of the Neurological Institute of New York have addressed the Society

and other talks and clinics were scheduled as follows:

February—Dr. Cowie of Ann Arbor, "The Theory and Practice of Local Immunity as Expounded by Besredka." March—Dr. Griswold of the State Health Department, "The Meningitis Epidemic." April—Dr. Dean Lewis of Baltimore, "Surgical Diseases of the Spleen." May—Dr. Joseph Collins, "The Selection and Management of Your Doctor." June—Dr. McKean of Detroit, "Hay Fever and Asthma." October—Dr. Harter Keim of Detroit, conducted a skin clinic, demonstrating thirty cases. November—Dr. W. J. Cassidy, "Cancer of the Uterus." December—Dr. Moore of Chicago, "Value of the Laboratory."

Three valued members of the Society died during the year: Dr. Bert B. Rowe, Dr. Thomas M. Williamson and Dr. Walter W. Slack. Dr. Bert Bessac Rowe, graduate of the Medical Department of the University of Michigan, Fellow of the American College of Surgeons, was a member of the staff of the St. Mary's Hospital, the Woman's Hospital and the Saginaw General Hospital.

Dr. Walter W. Slack, graduate of the Medical Department of the University of Michigan 1890, specialized in otolaryngology, was a Fellow of the American College of Surgeons and a member of the Staff of St. Mary's Hospital. He died August 29th, aged 66 of cerebral hemorrhage.

Dr. Thomas M. Williamson, graduate of McGill University 1891, was a member of the Staff of St. Mary's Hospital and of the Staff of the Woman's Hospital. He died August 31st, aged 65, of a double pneumonia.

Although not a member of the Society, the death of Joseph M. Wilson, McGill University, 1877, surgeon to the Pere Marquette railroad and a practitioner in Saginaw for 52 years, is regretfully recorded.

At the annual meeting, the Society presented Dr. Oliver W. Lohr, Director of the Central Laboratory, with a watch in recognition of the high quality of his service and the close co-operation maintained with the practicing physicians. The Society felt that this was a large factor in making the mortality in the recent meningitis epidemic the lowest in the country. The following officers were elected:

President, Oliver W. Lohr, M. D.; Vice President, Rockwell M. Kempton, M. D.; Secretary-Treasurer, Clarence E. Toshach, M. D.; Medical-Legal Advisor, J. O'Reilly, M. D.; Board of Censors, J. W. Hutchison, M. D., E. E. Curtis, M. D., Henry Meyer, M. D.

OAKLAND COUNTY

The monthly meeting of the Oakland County Medical Society was held at the Board of Commerce, Pontiac, Mich., January 16th, 1930. Following the dinner the meeting was called to order by our new president, Dr. Mitchell.

Dr. Ferguson introduced a resolution proclaiming our confidence in the management of the City Hospital, the conduct of which has been publicly criticized of late. This hospital was at one time a county institution and only recently has been taken over by the City of Pontiac. It still serves a large part of the county and consequently deserves our support.

The Advisory Medical Council was instructed by the president to co-operate with the various

health agencies of the county in all matters dealing with the care of the poor with a view of arriving at a satisfactory arrangement to all parties concerned. In this connection, Dr. Palmer E. Sutton, Royal Oak, discussed "A Plan for Rendering Adequate Medical Service to the Indigent."

Dr. J. R. Rupp of Detroit gave the address of the evening, discussing "Diphtheria Prevention in Detroit." He gave a short history of the development of the plan, which was worked out by the Health Department and the Wayne County Medical Society. Under this plan, the Board of Health seeks to make the doctor's office the health center, and they are sending all cases for toxin-antitoxin injections to the doctors' offices, and to a large extent, all venereal cases. In return, the doctors have agreed to charge a uniform fee for all cases that come to them during specified hours. Dr. Rupp also advised against turning all investigations over to social workers as he feels that in a large number of instances the doctor is more qualified. He also stated that this plan was intended to combat a tendency toward socialism in medicine.

In the discussion that followed, Dr. Monroe, County Health Officer, and Dr. Neafie of the Pontiac Health Department, declared their willingness to co-operate with the Medical Society if such a plan is adopted in this county.

Dr. F. A. Mercer presented a most interesting paper on "Arthritis" which received a great deal of favorable comment. The president attempted to forestall a discussion, but his autocratic attitude was firmly and effectively overruled. The discussion that followed was at least amusing, if not educational.

The business of the evening completed, the meeting was adjourned.

EDUCATIONAL RELATIONS OF PROFESSIONS

David Allan Robertson, Washington, D. C., asserts in a paper read before the Annual Congress on Medical Education, Medical Licensure and Hospitals, Chicago, February 18, 1929, that specialization in various academic divisions has contributed greatly to American educational progress. With the increase of specialization has come the danger of one educational unit isolating itself from another. Conscious of the danger, some of these divisions have learned the importance of co-operating in the solution of common problems. Among the professions and professional schools the danger likewise exists and to some extent has been met in the same way. No profession, no educational group in the United States, has made greater progress through specialization than medicine. At the same time medicine has endeavored to guard against isolation from the rest of the educational world. There has been an attempt to avoid the isolation of medicine from education; meanwhile there is evidence of isolation of education from medicine. Without losing the advantages of specialization Robertson hopes that each division of education will afford every other one the advantage of its experiences and that each will welcome the co-operation of other educational units. The schools and colleges can more effectively co-operate with the medical profession if the profession will teach them what a physician does. Specialization and co-operation is his plea.—Journal A. M. A.

THE DOCTOR'S LIBRARY

Offering Suggestions and Recommendations

FACTORS IN THE SEX LIFE OF TWENTY-TWO HUNDRED WOMEN—By Katharine Bement Davis, Ph. D. Published by Harper & Brothers. \$3.50.

This book, which is one of the publications of the Bureau of Social Hygiene, marks the beginning of an important and very valuable study of the sex life of women. It is referred to as a beginning because this type of study is new, and because the studies reported in this book are somewhat in the nature of preliminary studies which are not intended to be conclusive but to lead to many other studies.

The author, Katharine Bement Davis, is a Doctor of Philosophy, and a leader in sociology and penology. With many years of experience in penal-institutional work, and in social hygiene studies she approaches the present problem in a proper scientific manner, sex life being regarded just as eating habits or sleeping hours would be regarded. The twenty-two hundred women who form the basis of this study were sent questionnaires which they filled out and returned knowing that there was no way of discovering whom any reply came from. The first analysis made of these replies was concerned with the use of contraceptives, and the frequency of intercourse as a possible factor in sterility. The next analysis bore on the problem of married happiness. The backgrounds of the married and the single groups were carefully studied. A study was made of some auto-erotic practices among unmarried college graduates, and among married women. The next analysis was of periodicity of sex desire in the same groups, which were also studied as to homosexuality.

GRENZ RAY THERAPY—Gustave Bucky, M. D., New York, with Contributions by Dr. Otto Glasser, Cleveland, and Dr. Olga Becker-Manheimer, Hamburg. With Forty Illustrations in the text. Translated by Walter James Highman, M. D., New York. Published by the Macmillan Company, 1929.

Dr. Bucky brings out in his book the following information: Grenz Rays are soft Roentgen rays having wave length of from 1 to 3 Angstrom units and are produced in lithium glass X-ray tubes with voltages from 4 to 10 Kilovolts. The exact position of the Grenz Ray spectrum in the general spectrum of radiation is discussed. High tension apparatus and tubes for the production of Grenz Rays are described. The spectrum distribution of Grenz Rays is discussed. Grenz Rays are so soft that they are absorbed in air to a considerable degree. Therefore, only direct determinations of the radiation quality and quantity at the site of application are found to be satisfactory. The absorption of Grenz Rays in aluminum foil of 0.0125 mm. thickness has been determined for different conditions of radiation and the half-value layers of this radiation are found to be between 0.007 and 0.04 mm. of aluminum. The effective wave lengths are found to lie between 1 and 3 Angstrom units. Data for half-value layers of air, water, muscle, cutis vera are given.

There is much time spent in the comparison of the after effects of X-ray treatment and Grenz Ray treatment. Although the book is very readable, it seems that it should be given out more as a preliminary report, especially the latter part

of the book which deals with Therapy. The newness of the method and the small number of cases quoted and the recent follow-ups of these cases would leave plenty of room for conservatism and argument. Technic will improve as time goes on, and the idea presented by Dr. Bucky is of no mean worth. The chapter on the Physics of the Grenz Ray shows great care and adds much to the book as a whole.

CLINICAL OBSTETRICS—Dr. Paul T. Harper. Price \$8.00. F. A. Davis Company, publishers, Philadelphia, Pa.

Dr. Harper's book on Clinical Obstetrics published by the F. A. Davis Company has just come off the press. The efforts of the publishers in its appearance reflects the character that is so well known to all medical men—the paper and print are of the best—the eighty-four plates of engravings with two hundred and fifty figures show clearly the intent of the author.

Dr. Harper's efforts in this volume bring out the clinical side of obstetrics and as he says in the introduction, "What follows is a story of individual reaction to obstetric problems as they have presented themselves. In its telling, effort has been made to place principles involved over and above the procedures that might be carried out and this of necessity makes the account personal."

No exhaustive attempt has been made to present a complete treatise but the whole text is written in such manner as gives one the security of thought that the author is fully conversant with his subject. He reasons deductively, that, given certain principles, symptoms, conditions or environment, one should apply the clinical methods best suited.

The text is clearly and succinctly written and leaves no doubt as to the author's conclusions. Whatever it has been possible to illustrate by figures or diagrams the right procedure from the wrong in clinical application it has been done.

One chapter entitled "The Child Obstetrically Considered," is worth the price of the book. Chapter three is given up to the study of the physiology and pathology of Bandy's ring. The author lays great stress on the proper management of labor in this condition. A whole chapter is given up to the management of occiput posterior positions. Chapters on abortion, hemorrhage, puerperal sepsis, toxemia of pregnancy, etc., appear in logical sequence. Thirty-five pages are given up to the toxemias reviewing the standard treatments by Williams, Stroganoff and Tweedy. Besides the two commonly accepted causes of this phenomenon as nephritic and hepatic Dr. Harper introduces a third term as cardiac. The latter in no way may be associated with deficient function of either liver or kidneys but is of sudden onset and is manifested by rapid pulse, lowered blood pressure but without definite organic cardiac defect. The author declares boldly that seldom if ever will eclampsia occur in the patient to whom careful observations have been made for the early signs of toxemia. The whole text gives one the impression of the author as a close observer of symptoms and their significance.

Dr. H. Wellington Yates.

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THE THYMUS AND STATUS LYMPHATICUS*

JOHN LOVETT MORSE, A.M., M.D.**

BOSTON, MASSACHUSETTS

It is the fashion nowadays to attribute a great variety of symptoms referable to the respiratory tract above the bifurcation of the trachea, all sorts of disturbances of the nutrition and many unusual nervous manifestations, as well as sudden death, to the thymus. In addition to the symptoms which the thymus might theoretically cause by pressure, it is assumed that it has an internal secretion. On this assumption it is easy to attribute any and all symptoms to an increase or diminution in this secretion, as every infant and young child has a thymus. A Roentgenogram of the chest will, of course, show the shadow of the thymus. If this shadow is larger than it is supposed it ought to be, it proves to many physicians that an enlarged thymus is the cause of the symptoms. If the shadow is no larger than they think it should be, they say that there is something wrong with the picture and still attribute the symptoms to the thymus.

Whatever the size of the shadow, they usually advise treatment with the Roentgen ray. If the symptoms diminish or disappear at any time after such treatment, they are satisfied that the improvement is due to shrinkage of the thymus, which, of course, always occurs after treatment with the Roentgen ray, *post hoc, propter hoc*, always being a satisfactory explanation to many minds. If there is no improvement in the symptoms, they are likely to recommend more treatment with the Roentgen ray or shift to treatment with radium or the ultra-violet rays.

Physicians in general apparently do not

*This paper was read before the Detroit Pediatric Society in January, 1930. A similar paper was published recently in the New England Journal of Medicine, but, according to the author, is not an exact duplicate, although parts are the same. This paper is here published by the kind permission of both the author and the editor of the New England Journal of Medicine, to whom our grateful acknowledgments are due.—Editor.

**Dr. Morse graduated from Harvard University A. B. 1887; M.D. 1891. He was Professor of Pediatrics in Harvard Medical School 1915 to 1921. Dr. Morse has contributed extensively to the Literature on Pediatrics.

appreciate the fact that there is a difference between the symptoms which an enlarged thymus may cause by pressure on the other structures in the anterior mediastinum, those which may be due to a continuous or intermittent increase or diminution in the hypothetical internal secretion of the thymus and those which may result from status lymphaticus, of which enlargement of the thymus is only one manifestation. There also seems to be a general lack of knowledge as to the normal size and growth of the thymus and as to the size of the "normal" shadow of the thymus as shown by the Roentgen ray.

According to Hammar, Scammon and Boyd, the average weight of the thymus at birth is 13 grams. After a shrinkage of from 5 to 8 grams during the first two weeks after birth, the weight increases to about 17 grams at 6 weeks and 20 grams at 6 months. It then gradually increases to 35 grams at puberty and atrophies to 15 grams at 50 years. These figures are interesting. They tell us nothing, however, as to the size of the thymus in a given baby while it is alive. It is hard to say, moreover, of what use it is to know the size of the thymus in a baby with no symptoms. If it is large enough to cause symptoms from pressure, knowledge of its weight is unnecessary.

The thymus diminishes in weight in inanition and in any condition, whether acute or chronic, which causes loss of body weight. It also diminishes in size in many acute diseases before there is loss of body weight. It is evident, therefore, that the largest thymuses, and consequently the largest thymic shadows, are found in the healthiest and best nourished infants and children. Of interest in this connection is the fact that the lymphoid tissue of the body in general follows the same curve of growth.

The size of the thymic shadow, as shown in the Roentgenogram, varies according to the position of the child when the Roentgenogram is taken and the technic used. It is larger in inspiration than in expiration. Roentgenograms are untrustworthy, therefore, unless the patient is always in the same position, the technic is always the same, and they are taken in full expiration. Roentgenograms, as they are ordinarily taken, show nothing, moreover, as to the thickness of the thymus. There is ample evidence to show that the thymus, and in

consequence the thymic shadow, varies in size from day to day. This variation is probably due to the amount of blood which it contains. I have several times seen patients in whom the thymic shadow was much larger one day than it was the next. It is likely that if repeated Roentgenograms were taken during the day it would be found that the size of the shadow varies from hour to hour.

The thymus at birth is relatively short and wide. After birth, with the expansion of the lungs, the thymus becomes narrower and longer. The shadow of the thymus is wider, therefore, at birth and in the first few days after birth than it is later. Any one who has examined the thymus under the fluoroscope will appreciate how its shape varies with the respiration.

It seems evident from the facts just given that it is impossible, even with perfect Roentgenographic technic, to lay down any arbitrary rules as to the "normal" size of the thymus either in the newborn or in older infants and children. Roentgenographic technic being not infrequently far from perfect, it is evident of how little value many Roentgenograms of the thymus really are. It being impossible to determine from a Roentgenogram alone whether the thymus is of "normal" size for the given infant at the given time under the given conditions, it seems unreasonable to take Roentgenograms of the thymuses of all new-born babies, as is now being done at some hospitals and by some obstetricians. It seems still more unreasonable to allow a Roentgenologist, who knows nothing about the individual baby, to decide from the Roentgenogram whether the thymus is enlarged or not and whether it should be treated with the Roentgen ray to reduce its size. The only apparent object in diminishing its size, moreover, would seem to be to protect the baby against sudden death from status lymphaticus. The fallacies in the commonly accepted views regarding status lymphaticus and the relations between it and enlargement of the thymus will be discussed later.

The thymus being situated in the upper part of the anterior mediastinum, between the rigid spine behind and the rigid sternum in front, may, if enlarged, cause pressure on the other important organs which are located in the superior entrance of the thorax. The arteries are so stiff that they resist pressure. The veins may be com-

pressed, but are usually pushed aside. Pressure on them, however, may cause cyanosis of the face and upper extremities. The nerves are also usually displaced and, therefore, avoid pressure. Much has been written about the symptoms due to pressure of the thymus on the recurrent laryngeal nerve. The symptoms usually attributed to pressure of the thymus on this nerve are laryngeal stridor, wheeziness on inspiration, and a brassy cough. It is difficult to see just how an enlarged thymus could press on the right recurrent laryngeal nerve. It might press on the left recurrent laryngeal nerve, which winds around the aorta from before backward, just to the left of the remains of the ductus arteriosus. It is hard to see, however, how enough pressure could be exerted on this nerve to cause symptoms without marked pressure having first been exerted on the left innominate vein, with consequent cyanosis of the head and arm. The left phrenic nerve would be much more likely to be pressed on, moreover, than the recurrent laryngeal nerve. For some reason, however, no one has attributed any of the disturbances supposed to be due to the thymus to pressure on this nerve. Pressure on the recurrent laryngeal nerve irritates and, therefore, stimulates it. Stimulation of this nerve causes tenseness of the vocal cord and trouble with the voice, but no trouble with breathing and no stridor. Cutting of the recurrent laryngeal nerve causes very little trouble with the voice, and with quiet breathing no trouble in respiration. On exertion and with deep breathing, however, there is dyspnea and a slight wheezy inspiratory stridor. It hardly seems probable that an enlarged thymus could inhibit the recurrent laryngeal nerve without causing marked symptoms of pressure on other structures in the anterior mediastinum. Irritation of the vagus or trachea may cause glottic spasm and a peculiar "brassy" cough, which becomes wheezy when there is complete paralysis of the cord. The vocal cord is tense, however, when the recurrent laryngeal nerve is irritated. Incidentally, Dr. Wolbach, who has been pathologist at the Children's and Infants' Hospitals for many years, tells me that he has never seen a thymus which he thought exerted any pressure on anything and says that he cannot see how enlargement of the thymus could press on the recurrent laryngeal nerve.

The trachea bears the brunt of the pres-

sure. Pressure on the trachea may cause noisy respiration, dyspnea, retraction of the intercostal spaces and cyanosis. If the pressure is sufficient to cause noisy respiration, it will be noisy in both inspiration and expiration, because the pressure on the trachea is exerted during both inspiration and expiration. It is evident, therefore, that when inspiration only is noisy, the cause is not enlargement of the thymus. When noisy respiration is due to the pressure of an enlarged thymus, it is increased by extension of the head, which narrows the upper opening of the thorax. When the thymus is enlarged enough to cause symptoms of pressure, it is almost always palpable in the suprasternal notch and there is definite dullness under the manubrium. Furthermore, the larynx is not depressed during inspiration, because it is kept up by the enlarged thymus. When the thymus is enlarged enough to cause symptoms and physical signs, the Roentgen ray will, of course, show a large thymic shadow. A large thymic shadow, in the absence of the characteristic symptoms and physical signs of enlargement of the thymus, does not prove, however, that other symptoms, often erroneously attributed to enlargement of the thymus, are due to it. In fact, it should never be necessary to take a Roentgenogram of the thymus to determine whether or not certain symptoms are due to the pressure of an enlarged thymus. Likewise it should not be necessary to take Roentgenograms to determine that certain symptoms are not due to an enlarged thymus. It should be plain that they are not due to it, even if the shadow is enlarged, without taking into consideration all the errors which are associated with Roentgenograms of the thymus.

I have seen cases in which the characteristic symptoms and signs of an enlarged thymus were present. Some of them were seen before the Roentgen ray was discovered, and were relieved or cured by the removal of a part of the thymus. Some of them seen later were cured by treatment with the Roentgen ray. Such cases have, however, been very few. In the vast majority of the cases which I have seen, in which the symptoms have been attributed to enlargement of the thymus, they have manifestly been due to other easily discoverable causes, in spite of the fact that Roentgenograms were supposed to show an enlargement of the thymic shadow. The

errors in diagnosis have almost always been due to failure to study the symptoms carefully and ignorance of the unreliability of thymic shadows. I shall mention only a few of the more common mistakes which I have seen.

Cyanosis in the new-born, not so many years ago, was always charged to congenital heart disease, usually to a patent foramen ovale! Nowadays it is almost always attributed to an enlarged thymus, especially in those hospitals which employ a Roentgenologist and have him take a picture of all new-born babies. The causes of cyanosis in the new-born are the same now as they used to be, congenital heart disease, but not patent foramen ovale, atelectasis of the lungs, cerebral hemorrhage, congenital debility, chilling and adenoids, not to mention congenital anomalies like diaphragmatic hernia and congenital hypertrophy of the heart, which are probably just as common as enlargement of the thymus with pressure. All these conditions are easily recognizable, if the trouble is taken to look for them. If it is, it will seldom be found necessary to take Roentgenograms of the thymus. Moreover, if the thymus does exert pressure, it will be on the trachea rather than on the veins and will cause disturbance of the respiration, not cyanosis.

Intermittent attacks of slight cyanosis are not uncommon in infants and young children. These are nowadays often attributed to the thymus. There is no doubt, of course, that the thymus may vary rapidly in size, according to the amount of blood which it contains. It hardly seems reasonable to suppose, however, that an increase in the size would exert sufficient pressure on the trachea to cause cyanosis without causing dyspnea and noisy respiration. It does not seem likely, moreover, that it would compress the veins, which slip aside so easily, enough to cause cyanosis, without also exerting enough pressure on the trachea to produce the characteristic signs. It seems much more reasonable to attribute these fleeting attacks of cyanosis to the unstable circulatory system of the infant than to the thymus. It is hard for me, at any rate, to believe that cyanosis about the mouth in a baby with the colic, in one that is crying hard or is easily chilled, has anything to do with either the size or internal secretion of the thymus, even if some one says that the

thymic shadow is larger than he thinks it ought to be.

Many physicians apparently suspect enlargement of the thymus whenever an infant or young child has noisy respiration. A Roentgenogram is taken which is interpreted as showing an enlargement of the thymus. A positive diagnosis of enlargement of the thymus is made and treatment with the Roentgen ray instituted, without any attention being paid to the characteristics of the respiration, the findings on physical examination, or the possible errors in the taking or reading of the Roentgenograms. Under such circumstances, the diagnosis is more likely to be wrong than right and, in fact, it usually is wrong. Treatment with the Roentgen ray does no good, of course, when the diagnosis is wrong. Furthermore, the diagnosis of enlargement of the thymus prevents them from performing operations which are indicated, and which would relieve or remove the real cause of the trouble. Wasson has called attention, in this connection, to the frequency with which the bronchi show evidences of infection in early life and also how frequently infection of the paranasal sinuses is associated with it. He has also called attention to the fact that the reflexes of the young infant do not enable it to raise the mucus from the trachea in an efficient manner and suggests that certain of the cases of thymic stridor may possibly be due to mucus in the larynx and trachea. At any rate, he has found that methods directed toward the relief of such infections have relieved the respiratory stridor and that the respiratory stridor in such cases did not appear any different from that in other cases, which are usually diagnosed as thymic stridor. He calls attention to the fact that even if Roentgen ray therapy, applied to the region of the thymus, does relieve respiratory or thymic stridor, this does not necessarily prove that the stridor is due to the thymus. It is just as likely that the benefit is due to the irradiation of the mucous membrane of the trachea and adjacent bronchi. He notes that improvement often occurs too rapidly to be due to reduction in the size of the thymus and that the amount of stridor does not necessarily vary with the size of the thymus, as shown by the Roentgen ray.

It does not seem as if the obstruction to respiration caused by adenoids could ever be mistaken for that due to pressure on the

trachea from an enlarged thymus, the symptoms are so radically different. Nevertheless, in my own experience it is the mistake most often made. Physicians entirely overlook the snuffles, the "snorty" nose, the open mouth, the difficulty in nursing, the predominance of symptoms in inspiration, and pin their faith on an untrustworthy Roentgenogram. Overlooking all these characteristic symptoms of adenoids and not looking for or not knowing the characteristic symptoms of pressure of the thymus, they do not, of course, examine the nasopharynx for adenoids. If they did, they could not miss them, as, in such cases, the nasopharynx is full.

The inspiratory crowing sound caused by a congenital narrowing or infolding of the epiglottis, with consequent laxness of the aryepiglottidean folds, or to a congenital elongation of these folds—congenital laryngeal stridor—is also not infrequently attributed to enlargement of the thymus. In congenital laryngeal stridor the crowing sound is always in inspiration only and is constant, varying only with the depth of respiration. There are no other symptoms and no physical signs except the deformity of the larynx. If there is pressure on the trachea from an enlarged thymus the abnormal sound is present in both inspiration and expiration, there is usually some cyanosis and the physical signs of enlargement of the thymus are present.

Attacks of laryngismus stridulus in spasmodophilia are also occasionally attributed to enlargement of the thymus with pressure on the trachea. If these attacks are due to the thymus, it must be assumed that the thymus enlarges tremendously and almost instantaneously, and as quickly diminishes in size. If it did not, the babies would always die in the first attack. Such an assumption is hardly reasonable. The symptoms of laryngismus stridulus are pathognomonic. The baby takes several short inspirations in rapid succession, each accompanied by a crowing sound. It then stops breathing with the chest in full inspiration. It quickly becomes cyanotic. After it becomes sufficiently asphyxiated, the spasm relaxes and it begins to breathe again. It is hard to see how a sudden enlargement of the thymus could produce a symptom-complex like this. There are, moreover, always other signs of spasmodophilia present: tetany, facial phenomenon, peroneal reflex and changed elec-

trical reactions, as well as a diminution in the calcium of the blood.

Another condition for which enlargement of the thymus is often considered responsible is breath holding, that is, a condition in which an infant or child stops breathing as the result of crying or fright and begins again after it gets sufficiently asphyxiated to relax the spasm. If breath holding is caused by an enlarged thymus, it is necessary to assume, as in laryngismus stridulus, that it swells up and goes down again instantaneously, which does not seem probable. Incidentally, a Roentgenogram of the thymus between attacks would show nothing as to its size in an attack.

Other diseases whose symptoms I have known to be supposed to be caused by an enlarged thymus are retropharyngeal abscess, tracheobronchial adenitis, bronchitis and asthma. All of these may cause noisy inspiration and expiration. In bronchitis, however, the noise is most marked in inspiration and in asthma in expiration. In tracheobronchial adenitis the noise is usually louder in expiration than in inspiration, because the thorax is smaller and the pressure greater in expiration. There are always other physical, as well as Roentgenological, signs in tracheobronchial adenitis, and a retropharyngeal abscess can always be felt with the finger. A new growth in the larynx may also cause noisy inspiration and expiration. There is always trouble with the voice when there is a new growth, while there is none when the difficulty in breathing is due to the pressure of an enlarged thymus. It hardly seems necessary to take up the differential diagnosis between the dyspnea, cough and noisy breathing due to bronchitis and asthma and an enlarged thymus. They should never be confused. Nevertheless, when physicians have the thymus on their minds, they overlook the most obvious signs and symptoms and can see nothing but the shadow of the thymus. Many other more unusual causes for disturbances of respiration in early life, which are attributed to enlargement of the thymus, might be mentioned. I will only speak of one rather unusual one, that is, a round worm crawling from the esophagus into the larynx.

The thymus is not infrequently supposed to be responsible for convulsions, attacks of faintness, various manifestations of vasomotor instability and even colic. The dem-

onstration of what is interpreted to be enlargement of the thymus by the Roentgen ray is accepted as conclusive proof that these symptoms are thymic in origin. It is hardly necessary to go over the arguments again to prove that it is not possible to determine from a Roentgenogram whether the thymus is larger than it should be in the given child at the given time or not. Even if it could be shown that the thymus was larger than it should be, it would not prove that there was any increase in its secretion. The thyroid is often enlarged in cretinism, for example, but its secretion is diminished. In the conditions now under consideration, the symptoms cannot be due to compression of any of the other structures in the anterior mediastinum by an enlarged thymus. If they are connected in any way with the thymus, they must be due to a change in its secretion, presumably to an increase. It is idle to argue whether an increase in the secretion of the thymus does or can cause such symptoms or not, because, as it is not known what the hypothetical secretion of the thymus does normally, it is impossible to know what will happen if it is either increased or diminished. Moreover, all authorities, that really are authorities, agree that there is no proof that the thymus has an internal secretion. It closely resembles the lymphoid tissues in its principal physiologic and pathologic reactions and most students associate it with these tissues. There are certain indications that it plays some important part in the maintenance of normal nutrition, at least during the period of growth up to sexual maturity. Extirpation experiments show, however, that it is not essential to life and that thymectomy is not followed by any detectible symptoms. Physiologically there is evidently some relation between the thymus, the sex glands, the thyroid and the suprarenals. Granting that there is such a connection, there is nothing to prove or even suggest that it can be responsible in any way for these symptoms. Improvement or disappearance of the symptoms after treatment of the thymus with the Roentgen ray, with shrinkage of the shadow, does not prove that the improvement was due to a diminution of the secretion of the thymus, because the size of the thymic shadow varies continually. The symptoms cease in many instances without any Roentgen ray treatment and without any change in the size of the thymus, and the improvement

after treatment with the Roentgen ray may just as well be due to the disappearance of the real and undiscovered cause. It is useless to attempt to argue, however, when there are no premises on which to base the arguments. It is safe to say, nevertheless, that it is wise to look for other causes for these symptoms, even if the Roentgen ray shows what is thought to be an enlarged thymus, before starting treatment with the Roentgen ray. If such other causes are looked for, it will very seldom be found necessary to use the Roentgen ray in treatment.

Infants, children and adults sometimes die suddenly without any apparent cause or from some cause entirely insufficient to account for death, as at the beginning of anesthetization, from sudden shock, the introduction of a needle or in the course of some mild disease. In such cases enlargement of the thymus, spleen, lymph nodes, tonsils and Peyer's patches, hyperplasia of the bone marrow, and hypoplasia of the chromaffine, gonadal and cardiovascular systems are not infrequently found. The combination described above is spoken of as status lymphaticus. When this condition is found in instances in which death has occurred suddenly, without apparently sufficient cause, the death is said to have been due to status lymphaticus. There is, however, no proof that death was due to it. It is purely an assumption, based on the absence of any other obvious cause. There are plenty of sudden deaths in which no evidences of status lymphaticus are found and plenty of deaths from other causes in which the evidences of status lymphaticus are present. In this connection it may be pertinent to mention the little girl in Minnesota whose sudden death was attributed to status lymphaticus, but who later was found to have been electrocuted by stepping on an electrically charged stair, and another whose sudden death in a convulsion, at first attributed to status lymphaticus, was found to have been due to strychnia poisoning.

It has been quite generally assumed that enlargement of the thymus is the most important manifestation in status lymphaticus, and that the hyperplasia of the thymus is in some unknown way the cause of the other characteristic changes and of the sudden death. No one believes now, I think, that death in these cases is due to mechanical pressure of the thymus. If it is due to the thymus, it must, therefore, be connected in

some way with the hypothetical secretion of the thymus. The view that deaths in cases of status lymphaticus are due to lymphotoxemia originated in Svehla's observation in 1896 that thymus extracts lowered the blood pressure and accelerated the heart rate. These manifestations are now known not to be specific, but to be produced by many foreign proteins. It is hardly necessary to mention again that the consensus of expert opinion is that the thymus has no secretion and is simply a lymphoid organ. At any rate, if the thymus does have a secretion, there is nothing to suggest that this secretion can be the cause of sudden death. It is safe to say that there is no evidence to show that the enlarged thymus in status lymphaticus has anything to do with the causation of the other changes found in this condition. It is just as probable that the enlargement of the thymus is due to the same cause or causes as the other pathologic changes, if they are pathologic, or that the general lymphatic hyperplasia is the cause of the enlargement of the thymus. There is, moreover, some evidence to show that when there is a diminution of the secretion of the suprarenal medulla there is hypertrophy of the thymus. This suggests the possibility that in status lymphaticus the primary trouble is in the suprarenal medulla. This would not explain, however, the other changes found in status lymphaticus.

It has been suggested that the cause of sudden death in status lymphaticus is a sudden fall in the blood pressure produced by a temporary exhaustion of a deficient adrenal secretion. This explanation does not seem satisfactory, however, in view of the fact that, experimentally, cutting off the secretion of the suprarenals does not lower blood pressure and never causes instant death. In fact, animals can live indefinitely without any suprarenal medulla. It has also been suggested that a sudden cessation of the adrenal secretion would instantly cause hypoglycemia and sudden death. Adrenalin, however, simply mobilizes sugar from the glycogen in the liver and muscles. Cessation of the adrenal secretion would, therefore, simply prevent the mobilization of more sugar. It could not have any effect in diminishing the amount of sugar already in the blood. Certain cases of sudden death attributed to status lymphaticus occur during anesthetization. Ether, however, diminishes the insulin content of the blood. It is evi-

dent that if the insulin is diminished, the sugar in the blood will not be utilized. Therefore, the sudden cessation of adrenal secretion would not have any effect. Wiesel has suggested that sudden death in status lymphaticus is due to the injurious raising of the vagus tone in association with insufficiency of the chromaffine and sympathetic nervous system. This suggestion, while vague and indefinite, may perhaps touch on one of the factors involved. Whatever the true explanation of sudden death in status lymphaticus is, provided that sudden deaths occurring in status lymphaticus have anything to do with status lymphaticus, which is doubtful, it seems evident that there is no proof that the thymus has anything to do with it.

One thing is certain, namely, that enlargement of the thymus, provided what is thought to be an enlargement really is one, does not necessarily indicate that a child has status lymphaticus. It must be emphasized again, moreover, that it is very difficult to determine from a Roentgenogram whether a thymus is enlarged or not. It is obviously irrational, since it is not known whether status lymphaticus is a cause of death or not, whether the thymus has anything to do with the etiology of status lymphaticus or whether the shrinking of the thymus has any effect in status lymphaticus, and since the thymus may be enlarged from other causes and the evidence afforded by Roentgenograms is not sufficient to prove that it is enlarged, to claim that every child that shows what is supposed to be an enlarged thymus with the Roentgen ray is in danger of sudden death. It is unreasonable to say, therefore, that every child should have a Roentgenogram taken before it is given ether or operated on in any way and, if the Roentgenologist thinks the shadow is larger than it should be, given Roentgen ray treatment. Nevertheless, this is just what is claimed by some Roentgenologists and some physicians.

It must be admitted, of course, that children have died unexpectedly under anesthesia and that some of these children have shown the changes of status lymphaticus. Many others have died under anesthesia that did not show these changes. The question at once arises as to whether the deaths in those that showed these changes were not due, as in the others, to improper anesthetization, prolonged operation or impaired re-

sistance from infection. No one, of course, can tell. It must also be admitted that many children in the past, before the Roentgen ray was discovered, must have had thymuses which would now be considered enlarged and did not die under the anesthetic. Moreover, children that are said to have enlarged thymic shadows are now operated upon without injury. It is also true that children who have had Roentgen ray treatment before operations have not died. No one knows whether they would have died or not if they had not been treated. The probabilities are that they would not have died. The basis for this statement is as follows. It is claimed that 7% of all children under ten years of age have enlarged thymuses which demand Roentgen ray treatment before operation. There is no reason to suppose that enlargement of the thymus is any more common now than it always has been. It is certain that in the past 7% of the children under ten years of age, who have been anesthetized and operated upon, have not died. The operative mortality in the past, as in the present, has varied with the skill and judgment of the operator and with the institutions at which the operations were performed. Treatment with the Roentgen ray before operations will not prevent death from improper anesthetization or prolonged and serious operations. Deaths have occurred, therefore, after Roentgen ray treatments. It is assumed, because the children had been treated with the Roentgen ray, that these deaths were not due to status lymphaticus. Is it not just as reasonable to believe that the deaths that occur in children that have not had Roentgen ray treatment are not due to status lymphaticus but to improper anesthetization and poor operative judgment and technic? It would be neither polite nor politic to publicly advance the evidence in favor of this contention.

Having had no operative experience myself and fearing that I might be minimizing the frequency of the occurrence of death from status lymphaticus during anesthetization and operation, I asked a number of Boston surgeons and anesthetists, whose experience with children had been large, how many deaths they had seen in children during anesthetization and operation, which they thought were due to status lymphaticus. Of twelve very well known surgeons, one had seen one case in which there was no other evident cause, and another remem-

bered two in which that diagnosis had been made. One of these children had been operated upon before, however, without any difficulty. The anesthetists said that they had never seen a death which they thought was due to status lymphaticus. They also said that they not only considered it unnecessary to take Roentgenograms of the thymus before operation, but that they did not fear to give an anesthetic, even if a Roentgenogram did show what was thought to be enlargement of the thymus. Garland, moreover, has recently summarized 1,564 routine autopsies at the Massachusetts General Hospital. Enlarged thymuses were found in 23. Nine of these were in adults, eight of whom had hyperthyroidism and one a severe and chronic infection. Eleven had survived the immediate effects of major operations. Only one case had died during operation, a sigmoidostomy for intestinal obstruction.

It is evident from the experience of these surgeons and anesthetists that death from status lymphaticus, at any rate in Boston, as the result of anesthetization and operation must be a most unusual occurrence. There is much doubt whether the deaths that are attributed to status lymphaticus during anesthetization and operation are really due to it. There is no proof that enlargement of the thymus is the primary or causative factor in the complex described as status lymphaticus. There is no justification, therefore, for the assumption that shrinking of the thymus with the Roentgen ray will have any effect on status lymphaticus. There is much reason to believe that many of the Roentgenograms taken do not show the real size of the thymus and much evidence to show that it is very difficult to decide from a Roentgenogram whether the thymus is larger than it ought to be in the given child at the given time. It does not seem either reasonable or justifiable, therefore, to say that a Roentgenogram should be taken of every child before anesthetization or operation, that treatment with the Roentgen ray should be given in every case before anesthetization and operation, if the Roentgenologist thinks that the shadow is enlarged, and that the physician or surgeon who does not follow this course of procedure is negligent.

The opposite point of view is that "since there is no evidence that the thymus is not an integral causative factor in the type of

death under discussion and it is known that involution of the thymus takes place rapidly and *without harm* following X-ray and radium treatment, it would appear not only desirable but requisite, until such time as more exact knowledge or experience shall warrant a contrary opinion, to prescribe radiation therapy for those children presenting X-ray evidence of 'broadened mediastinal shadow' without symptoms, when general anesthesia or surgery is contemplated."

I leave it to you to decide for yourselves which of these conclusions is correct. I, of

course, have no doubt. Such differences of opinion, however, place the conscientious physician, who wishes to do everything that is necessary for his patients, but who also wishes to remain an honest man and to save his patients unnecessary expense, in an unfortunate position. At present all that he can do is to explain the situation to his patients and let them decide what they wish to have done. He can be comforted, however, by the knowledge that this fad will wear itself out, as have so many others, and that common sense will again prevail.

SECOND PEDIATRIC CONFERENCE ON DISEASES OF INFANCY AND CHILDHOOD*

The Couzens Fund Clinic held in Flint on January 15th was well attended and the same marked interest was shown as at the first clinic given under the auspices of the Couzens Fund at the University of Michigan at Ann Arbor. The speakers were Dr. D. J. Levy of Detroit, Dr. Edward C. Davidson, Dr. Grover C. Penberthy of Detroit and Dr. C. C. Young of the Michigan State Department of Health.

Dr. Levy gave a clinic on two subjects, first, Hemorrhage of the New Born, and secondly, Feeding of the New Born. In the first address Dr. Levy spoke on the causes of hemorrhage. Hemophilia was, he said, a rare cause in the new born but was manifested primarily in the second year. Of the causes numerated were injury, ulceration in the alimentary tract, congestion due to cord strangulation, sepsis, and lastly maternal and familial tendency with the lack of vitamin B in the mother a possible factor.

A hemorrhage might be external or internal. External hemorrhage might involve the skin and mucous membrane, umbilicus, nose, or it might be from cephalohematoma. Internal hemorrhage might be intra-thoracic, intra-abdominal, or intra-cerebral. Among the diagnostic factors in the cerebral hemorrhage might be mentioned the gradual and late onset, namely, the second or fourth day. The labor history, where we have a normal, quick, spontaneous labor, may aid us in coming to a conclusion. The little patient usually manifested a drowsiness alternated with restlessness. We might have dyspnea, slow, rapid or irregular breathing and also a slow, feeble or irregular pulse. Lack of interest in food in the little patient should always be taken as sug-

gestive. The condition of cerebral hemorrhage might be accompanied by irregular temperature or fever, cyanosis, twitching, convulsions, projectile vomiting.

In the treatment of these cases Dr. Levy spoke against too active treatment, especially in the cerebral cases. The patient should be kept warm. If stimulation is indicated it should be used with caution. In regard to blood therapy, the speaker went on to say that in giving intravenous blood the process of "typing" was necessary. The maximum individual dose should be 1/60 of the body weight. Animal serum was less effective.

FEEDING OF THE NEW BORN

In his discussion of the subject of feeding, Dr. Levy dwelt upon the kind of food, the quantity and the interval between feedings. Though food be right in kind and quantity, success of the feeding program, he said, depended also on a proper feeding interval. Six feedings at four hour intervals, or a minimum of three and one-half hours should be observed whether the feeding be artificial or maternal. It could be easily demonstrated by means of the X-ray that the stomach was not emptied in three hours.

If the three hour interval were employed

*This article consists of an abstract of each of the clinical addresses given at the Couzens Fund Clinic held in Flint. They are summarized accounts of the clinicians' addresses. This fact is mentioned so that it will be understood that the reader will not hold the speakers to account for the phraseology employed, as no attempt has been made to quote or to report verbatim.—Editor.

the infant's stomach was apt to become overdistended and painful. There was a tendency to regurgitation and vomiting. Residual milk, the speaker went on to say, tended to ferment and produce gas. On the other hand too frequent feeding did not give the mother the opportunity for necessary attention to other children as well as other domestic duties. If the baby did not receive sufficient food at the three and one-half hour or four hour schedule it would probably receive less and not more if fed oftener.

Breast feeding had its advantages. The contra-indications to this form of nourishment consisted of pulmonary tuberculosis or of hyperthyroidism on the part of the mother. Insufficient quantity of milk calls for complemental or supplemental feeding.

Dr. Levy then took up the technique of weaning infants. In regard to milk dilutions, he said, the most frequent fault encountered was in keeping the child too long on too weak a mixture. Dilutions containing less than $\frac{1}{3}$ milk were never necessary. Lactic acid milk, he said, might be given to the new born baby undiluted, but in the earliest days it should have all the cream removed, and in the earlier weeks one-half of the cream removed. In all cases, the speaker went on to say, about five per cent sugar should be added to ensure proper metabolism of the fat. New born babies were more dependent on fluid intake during their first days than on caloric values. Dehydration when present was to be combated by saline or five per cent glucose solution or by hypodermatoclysis.

The total quantity of food required in twenty-four hours according to Dr. Levy, was as follows: 2nd day 2 oz.; 4th day 4 oz.; 5th day 6 oz.; 6th day 8 oz.; 7th day 10 oz.; 2nd week 12 oz.; 3rd week 16 oz. to 20 oz.; 3rd to 4th week 25 oz.

The speaker went on to say that fever from inanition must be differentiated from that due to infection. If occurring during the first half of the first week the fever is probably due to insufficient food or fluids; if during the second half, we might consider infection or some other cause.

The technique of feeding involved the emptying of both breasts and the employment of both breasts at the outset. The total time of breast feeding should be limited to twenty minutes. If the baby showed too sharp an initial drop in weight or it continued to lose after the fourth day, or

failed to gain at that time, complemental feedings should be instituted. Efforts should be made in every instance to have the baby back to its birth weight by the end of the second week. A scanty, olive green mucoid stool signified hunger. Discomfort during or immediately following feeding was due, the speaker said, to swallowed air and not to fermentation. Gas occurring later might be due to fermentation. The presence of swallowed air could be relieved by holding the infant upright rather than by using carminatives. Vomiting was apt to be due to a faulty schedule or faulty formula, cardiospasm, pyloric spasm, esophageal stricture or cerebral hemorrhage.

In regard to the subject of vitamins the speaker advocated cod liver oil, orange juice by the end of the first month.

CYANOSIS OF THE NEW BORN

On the subject of cyanosis of the new born Dr. Levy enumerated the causes as follows: Drugs or anesthetics administered to the mother; lack of development of the respiratory center in the child, chilling, amniotic fluid or aspirated food in the air passages, congenital anomalies of the respiratory system; distention of the stomach and meteorism; cerebral hemorrhage and atelectasis. The thymus, Dr. Levy said, was very much less a causative factor of cyanosis than had up to recently been supposed.

He outlined the treatment by advising first the discovery of the cause and its correction. In the new born particularly the cleansing of the air passages if necessary by the use of the tracheal catheter was advisable. Oxygen and oxygen and carbon dioxide might be indicated, also heat. If artificial respiration were resorted to the speaker counselled extreme caution as to the method employed, especially in cardiac and cerebral cases.

THE TREATMENT OF BURNS

This was the subject of Dr. Edward C. Davidson's address. He went on to say that there was evidence of a formation of a toxic substance at the site of a burn, the absorption of which was responsible for the constitutional reaction. The rate of absorption could be decreased by the use of a protein precipitant such as tannic acid which accomplished the purpose by the formation of more or less insoluble compounds which were held upon the surface of the wound. About forty-five per cent of burns which

cause death were in children under six years of age. The average age of burn cases admitted to the Children's Hospital of Michigan was three years. The speaker went on to say that more boys die of burns than girls.

The prognosis of any given case of burn in childhood must be guarded because of the profound metabolic upset. It has been stated that an adult may tolerate a burn involving one-third of the total body surface, while a child will tolerate a burn involving only one-seventh of the total cutaneous area. It has further been stated that in regard to prognosis the extent was of more importance than the depth of the burn. This statement is true for immediate mortality but it is certainly not true for ultimate mortality in children.

The depth of a burn is determined by the temperature of the agent and the duration of the contact. The skin of a child is thin and delicate. Accordingly, an intensity of heat applied to the skin of a child for a given increment of time may cause a third degree burn, while the same thermal stimulus on the thicker, more resistant skin of an adult may cause only a first or, at most, a second degree burn. For this reason large deep burns are seen frequently in children from what appears to be relatively slight thermal injury. This may leave a large granulating wound which is very badly tolerated early in life and is of grave prognostic significance. Unless prompt epithelization is accomplished by skin grafting the picture of exhaustion develops and complications occur.

SHOCK

"When a child receives a burn of any great extent, shock almost invariably occurs. Cannon has presented a rather plausible theory of shock and concluded that it is due to the absorption of autolyzed protein from the site of the injury. Crile, on the other hand, emphasizes the stimulation of the sensory nerve endings. It would, therefore, seem reasonable to assume that any drug which would precipitate the protein devitalized by the burn and stop absorption, at the same time dulling the exposed sensory nerves, would be effective, regardless of which theory one accepts. Tannic acid is such a drug.

"Our method," continued the speaker, "has been to clean up the burn with the least possible trauma. Place the child in a light

tent and spray the burned area with an aqueous solution (5 per cent) of tannic acid every fifteen minutes until the burned area is a light brown color.

"It has been shown that marked concentration of blood occurs and that if this is permitted to exist it is soon incompatible with life. It is known that hyperglycemia occurs during this initial period and that the blood chlorides are markedly depressed. Because of these facts, normal saline is given instead of glucose subcutaneously, intravenously and per rectum. In very extensive burns transfusion of whole blood is done as promptly as possible before shock has occurred."

TOXEMIA

"When a burned patient survives this initial collapse there is a later secondary toxemia which occurs about 36 hours after the thermal trauma. It has been shown that precipitation of the tissue, devitalized by the burn, with tannic acid limits absorption and prevents the loss of body fluids at the site of the burn by covering it with a parchment-like protective coagulum. It has further been shown that moistening this dried material immediately releases the toxic material and causes a profound change in the patient.

LATE TREATMENT

"It has been observed in second degree burns that the coagulum acts as a splint, and healing takes place beneath it. This is generally complete at the end of two or three weeks. Efforts made to separate the coagulum before it has spontaneously separated have invariably resulted in infection. Should the coagulum remain adherent more than 21 days, it may be assumed that the burn is one of the third degree. It is relatively safe to soak off small pieces of coagulum at this time, but great care must be exerted not to overwhelm the patient.

SKIN GRAFTING

"Unless the raw granulating wound, which presents in third degree burns upon separation of the coagulum, is promptly epithelized various complications occur. For this reason the wound is covered with pinch grafts at the earliest possible date. It has been observed that a profound anemia has developed by the time that the child is ready for grafting. Because of this, transfusion is often resorted to previous to grafting in an effort to insure a satisfactory result.

"The procedures above outlined have resulted in a striking reduction in deaths from

shock and toxemia of burns. The late mortality remains high, but this may probably be attributed to children being carried over who previously died promptly, either from shock or the toxemia of burns."

TREATMENT OF EMPYEMA

This subject was handled by Dr. Grover C. Penberthy of Detroit. Empyema usually followed pneumonia. In the surgical treatment, pneumo-thorax was a complication to be avoided. By resorting to closed drainage the mortality from empyema had been reduced from about 30 to less than 10 per cent. In the management of empyema the speaker advocated the avoidance of opened pneumo-thorax in the acute stage and the prevention of chronic empyema by providing dependent drainage, rapid sterilization and obliteration of the infected cavity. Care should also be given to the nutrition of the patient.

The classification of the stages of empyema as given by Moschowitz, namely as formative, acute and chronic, was followed. During the formative stage of the disease the child may be very sick with pneumonia when the presence of fluid will materially diminish the breathing space or "vital capacity." It should be remembered that the collapse of one lung is not always followed in a compensatory way with the normal lung. Dr. Penberthy went on to explain that the vacuum or negative pressure existing between the chest wall and the elastic lung is essential to respiration, and if the patient cannot produce this, little or no air enters the lung. With an opening in the chest wall producing a pneumo-thorax, the negative pressure is destroyed, thereby lessening the pull of the expanding chest. Unless there is compensation by increased respiratory effort and the negative pressure is re-established, asphyxiation is apt to occur. If a slight negative pressure is re-established, the animal might get air into the lungs, but not sufficient to maintain life.

It should be constantly borne in mind that an alteration of pressure in one pleural cavity is accompanied by an alteration of pressure to practically the same extent in the other pleural cavity, if there are no adhesions or any thickening of the mediastinal structures. It has been further shown that the ability of an animal to offset the effects of open pneumo-thorax depends upon the size of the opening made and the size of the

animal. The same comparative results would apply to the human. The muscular chest wall and vital capacity of the adult is greater than that of the child, consequently there would be an increased danger of producing a pneumo-thorax in a child. The total air intake of a child, as compared with the adult is small, so a small opening might so lessen the negative pressure as to cause death. A small leak about a catheter in the closed drainage has been observed in a child, as a factor in producing dyspnea, cyanosis, a rise in temperature and a rapid, thready pulse.

Besides the presence of fluid, other factors which should influence the treatment of a child sick with empyema are the associated toxemia, fever, dyspnea, malaise, fatigue, loss of appetite, loss of weight. All this indicates the most conservative manner of treatment. The treatment during the formative stage should be aspiration either every day or every other day. The speaker advocated the insertion of a catheter under local anesthesia for drainage when the pus became a cloudy yellow with the consistency of thin cream. Dr. Penberthy's technique was given as follows:

The catheter is first tested to be sure that it snugly fits the trocar. The trocar and stilette are then plunged into the chest wall, the stilette withdrawn and the finger placed over the end of the cannula. The catheter, the tip cut on the bevel, an extra eye cut one-half inch from the tip and the distal end clamped, is then threaded into the cannula. The cannula is then carefully withdrawn over the catheter. A 50 c.c. syringe is next attached before removing the clamp, and with the clamp removed, the pus is aspirated. The pus is slowly withdrawn and aspiration stopped if there is any coughing or evidence of bleeding. A small adhesive strip is then placed about the catheter like a cuff at the chest wall and the catheter fixed to the skin by strips of adhesive.

Aspiration may be started a few hours later. To test the irrigation, saline or boric solution is used and if found satisfactory a neutral 0.5 per cent solution of sodium hypochlorite (Dakin's solution) is injected and withdrawn. Some Dakin's solution is allowed to remain in the cavity at the end of each irrigation. The catheter may be unclamped and irrigation practised every 3 or 4 hours.

In the post-operative management of em-

pyema it is important to check up frequently by means of the X-rays to determine the position of the catheter as regards the fluid level, the amount of fluid if any, and if there is a pneumo-thorax. The catheter may be left in place for 2 or 3 weeks and then cut one inch outside the body and left as an open drain. If this drainage is inadequate the intercostal opening may be dilated with the hemostat and a larger tube inserted.

Adhesions will have formed to hold the lung out and not permit its collapse. Frequent determinations of size of the cavity are valuable in following case. Best done by taking child to operating room.

Dr. Penberthy considered the conservative method of handling empyema to have reduced the mortality from 30 to 10 per cent. It required more close watching and attention than did rib resection. Frequently rib resection might be necessary later, at which time it might be much more safely done.

ACUTE OSTEOMYELITIS—ITS DIAGNOSIS AND TREATMENT

Dr. Penberthy also gave a clinical address on this subject. He considered osteomyelitis one of the most serious diseases of childhood, owing to the possibility of a septicemia which might terminate fatally. The acute form of the disease was most often found among the poor children of the city between the ages of two and ten years. Periostitis was associated with and usually secondary to osteomyelitis.

Dr. Penberthy then went on to review the anatomy of the long bones and show how their peculiar architecture was affected by the disease. Acute osteomyelitis was, he said, a blood-borne infection, having as probable foci skin lesions such as boils and infected blisters, and an ear infection might also be the cause. The acute process often began or was localized near the epiphysis of the long bone. According to Wilensky the process was a thrombo-embolic phenomenon with the development of a pathological process characterized by thrombo-arteritis or thrombo-plebitis and necrosis of bone cells and tissue. Trauma was considered a contributory factor in the localization.

The organisms most commonly found were the staphylococcus aureus and occasionally staphylococcus albus. The streptococcus was seldom found. The blood picture showed a leucocytosis and an increase in the polymorphonuclear cell counts from

20,000 to 35,000. Polynuclear 82 to 93%. The X-rays were of little value in making a diagnosis in the early stages of the disease, that is, during the first week. The early diagnosis of acute osteomyelitis required careful analysis of the different points in diagnosis. Pain and tenderness near a joint should lead one to suspect an acute arthritis or rheumatic fever. Rheumatic fever is seldom monoarticular and it is quite impossible to manipulate a swollen, hot rheumatic joint without evidence of severe pain, while a joint near an acute osteomyelitis can be moved, if manipulated gently. The constitutional symptoms are also more pronounced in osteomyelitis. Suppurative joints and bursitis can be eliminated by aspiration and examination of the fluid. The two other conditions giving a mono-articular clinical picture are tuberculosis and gonorrheal arthritis, both of which easily can be eliminated. Other conditions suggesting somewhat the picture of an osteomyelitis are: Green stick fracture, localized cellulitis, epitrochlear adenitis with swelling, redness and tenderness above the elbow, erysipelas, erythema nodosum and scurvy.

TREATMENT

The treatment of acute osteomyelitis is essentially surgical, and the earlier the diagnosis can be made and drainage instituted the better is the prognosis. Although proper and adequate drainage is important, it is unwise to attempt too much surgery as these patients are seriously ill. A few drill holes in the shaft at the site of the localized tenderness and the removal of the portion of the cortex between them many times suffices. The operating period should be as short as possible, consistent with good work. The anesthetic of choice is gas oxygen and the surgery done under tourniquet control. A plaster dressing should be applied, immobilizing the joint above and below, or a Thomas splint may be used.

Operation may follow a preliminary blood transfusion, or the transfusion may be given after operation. and repeated as the needs indicate. Fluids are forced in addition to giving saline and glucose, either intravenously or sub-cutaneously, depending upon the condition of the child. Vaseline gauze is packed into the wound. The question of Dakinization of the wound depends somewhat upon the findings at operation. Minimizing the surgical dressings is to be encouraged after the method of treatment advocated by Orr.

FUNDAMENTAL FACTORS UNDERLYING THE DEVELOPMENT
OF ALIMENTARY DISORDERS IN INFANCY*

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The causes underlying the development and manifestation of acute alimentary diseases are various and at times seem quite complex. The seeming haziness of the medical practitioner as to fundamental causes underlying the disorder and his indecision as to the proper therapeutic procedure for a given case, are indications of this fact. He gropes in a maze of perplexities and finally attempts a way out of his difficulties by falling back upon such empirical knowledge and experience as he may have, or has gotten as an emergency loan from a sympathetic colleague.

There are fundamental causes underlying the development and manifestation of acute alimentary disorders. If they are clearly recognized and logically analyzed, and fitted to the case, they will simplify the diagnosis, and, what is much more important, will give clear-cut indications as to procedure and choice of treatment.

The cause of the acute intestinal disorder may lie in the food itself—the amount, composition and condition in which it is given. It may lie in the individual and may be concerned with such factors as metabolic dysfunctions, faulty enzyme action, or the gastro-intestinal tract. It may lie in extraneous causes which have been introduced into the organism in the nature of enteral or parenteral bacterial infection or parasitic or protozoan infestation. It may be a part of, or indirectly referable to constitutional disease or disposition in the individual.

In considering the causes of acute intestinal disorders and their treatment, it is of fundamental importance to have a clear understanding of the conception of food tolerance on the part of the organism and the conditions or factors which influence it. For practical purposes it is sufficient to consider in this light only the three principal food components, protein, carbohydrate, and fat. The minerals and accessory factors are important but do not play a dominant role in the picture or development of acute alimentary disturbances.

It is important to recall and remember that these food components have definite and individually very different chemical and physical characteristics, and are affected in various ways by normal and abnormal conditions in the individual, particularly if they take place in the gastro-intestinal tract. The chemical structure of these components so

largely determines their characteristic behavior. Fat has a comparatively simple structure, is made up principally of three essential elements, and of these carbon and hydrogen are far in excess of oxygen. Expressed in terms of activity it means that it is a comparatively inert food component, and not particularly reactive to chemical, bacterial, or enzyme action. Physiologically it is the most inert food component and almost invariably slows down gastro-intestinal motility.

Carbohydrate is the active dynamic component. Of very simple structure, consisting also of three essential elements, it is far more reactive than fat on account of the arrangement of these elements around the carbon atom, and the far greater preponderance of O and OH group.

The component is easily attached and broken up by various influences, chemical, bacterial, enzyme, or what not, and then quickly rearranges into all manner of compounds, generally of lower fatty acid types, many of them highly toxic in their effects.

It leaves the stomach more rapidly than either fat or protein. Practically all of its breakdown for good or bad use of the body takes place in the small intestine, and is accomplished before the large bowel is reached.

It is the chief component involved in all diarrheal states and is the most treacherous component to deal with in the reestablishment of normal conditions.

The structure of protein differs widely from that of either fat or carbohydrate. Its huge molecule consisting to such a large extent of ring compounds, and the great preponderance of nitrogen in the molecule makes it quite invulnerable to bacterial attack, or enzyme action, and prevents the easy disintegration of its molecule.

Its effect on gastric motility is greater than that of fat, but decidedly less than that

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of carbohydrate. The tolerance of the organism to this component is seemingly excellent under all conditions of health and disease.

If the feeding régime is safely within the tolerance line for the various food components mentioned, and is adequate from a caloric standpoint, there will be no untoward symptoms and the infant will show satisfactory gain and well being, and absence of all symptoms of gastro-intestinal disease.

If the tolerance line is transgressed in any one or in all of the components, the transgression is promptly reflected in symptoms pointing to gastro-intestinal disorder. For practical purposes, the transgression concerns usually only the carbohydrate and fat component if the food factor alone is concerned as a cause.

The infant's tolerance can be affected or influenced by various factors. Constitutional disease or dyscrasias may influence it unfavorably. The gastro-intestinal lability of the congenitally syphilitic, the tuberculous infant, the fat tolerance of the infant affected with constitutional dyscrasias such as the exudative or lymphatic diathesis are well known examples.

Endocrine dysfunction, although rarely encountered, may be a factor. Gross over-feeding in fat or carbohydrate or in all three components may cause a breakdown with eventual manifestation of alimentary disease. There may be decomposition of the components before they are introduced into the alimentary tract. This is easily possible and commonly occurs in the giving of spoiled food, especially the milk foods. There may be alteration in the intestinal flora from various causes, more seldom disorder of enzyme function. Heat and excessive degrees of dehydration, especially the latter, causing great disturbance in the acid base equilibrium of the organism are grave contributing factors. Then there is finally the enteral bacterial or protozoan infection and the far flung parenteral infection, also always bacterial in nature and seldom passing without some very definite effect upon the gastro-intestinal tract.

The transgressions of tolerance are expressed in the manifestation of the well known symptoms of gastro-intestinal disease. These are mild or severe in proportion to the degree in which the tolerance has been transgressed.

If spitting, regurgitation, vomiting, or con-

stipation are the predominant symptom, it is safe to assume that the fat component in the food is at fault and must be modified. The buffer value of the food and hydrogen ion concentration are also factors to be considered.

If it is some form of diarrhea unaccompanied by blood in the stool, the carbohydrate component will be found at fault if the causative factor lies in the food itself, and is not traceable to enteral or parenteral, bacterial, or protozoan infection.

It is very commonly characteristic of the diarrheas due to enteral or parenteral infection that they contain blood in the stool. Clinically, this distinguishes them from other forms and serves as a good differentiating point.

It is important to have a fairly complete knowledge of the various milk modifications and milk food preparations now so widely used in infant feeding. Nearly all of them are practical expressions of some of the excellent research done in this field in the past ten or twenty years.

Their composition in the three principal components, fat, carbohydrate and protein, must be accurately known. The buffer value and hydrogen ion concentration are also of importance.

It goes without saying that the food must be clean.

Bearing in mind the facts mentioned above, the approach to a case of acute alimentary disturbance becomes quite simple. The accurate analysis of the case should be possible enabling one to get a clear cut opinion as to the type of alimentary disorder confronting one and at the same time giving clear cut indications as to treatment particularly with reference to feeding.

The symptoms pointing to gastro-intestinal disorder are generally prominent and must be carefully noted because they indicate not only the transgression of tolerance but often identify the component or phase involved. Careful questioning with critical inspection of the case and of the antecedents quite readily establishes or illuminates endocrine and constitutional disease factors.

The most searching diagnostic inventory of the case will reveal the presence or non-presence of parenteral infection. If present, it immediately assumes importance as a causative or related factor in the alimentary disorder.

In this connection it is important to re-

member that ear and especially mastoid infection, and infections of the accessory head sinuses, head the list of the parenteral infections which definitely can and very frequently do affect the gastro-intestinal tract.

If a parenteral infection is not present, the case is quite simplified. It is an enteral disturbance. The causative factor lies in the food itself or in some metabolic disorder or in some type of enteral infection, either bacterial or protozoan.

If the disturbance is non-diarrheal, and consists mainly in rejection of much of the food, or in constipation, two things may be wrong. The volume of food given may be excessive, or the composition of the food itself may be at fault in some of its components, or buffer values, or hydrogen ion concentration.

The fat component generally plays a big role in this disorder. Elimination of much of it from the food goes a long way toward the correction of the disorder.

The buffer value of the food and the pH of the mixture given are other factors which must receive consideration in this type of disorder.

If vomiting, generally unaccompanied by diarrhea, is persistent and is the principal symptom, a deeper seated disorder, probably metabolic, must be thought of. It may have its origin in the liver, pancreas or kidney. Cerebral conditions must be ruled out.

This type of alimentary disturbance is generally afebrile.

If the disturbance is diarrheal and parenteral infection has been certainly ruled out, the disorder is enteral, and the cause lies either in the food itself, or there is an enteral infection in the nature of a bacillary invasion or protozoan infestation. Decomposed food, most commonly milk, is generally responsible for the former condition. Infection with the Flexner or Shiga's bacillus, or abnormal colon flora accounts for many of the bacillary types. Ameba and other forms of protozoa account for the more infrequent type of protozoan infestation with resulting diarrhea.

In all three conditions—the parenteral infection, the entero-catarrh or intestinal intoxication, and the bacillary dysentery—diarrhea and fever are the outstanding symptoms. The behavior of these two clinical symptoms to treatment, for example, complete starvation with liberal administration of fluid, gives a valuable mechanism of

differentiating entero-catarrh or intestinal intoxication, not due to parenteral infection, from one that is due to this cause or is bacillary or protozoan in nature.

Upon complete starvation and the free administration of fluids, the temperature will fall in even the most severe intestinal intoxication and there will be marked, if not complete, improvement in all gastro-intestinal symptoms.

This does not occur in the diarrheal conditions due to parenteral infection or those due to bacillary infection, the true enteritis. No appreciable change or improvement in symptoms will occur.

Under no circumstance must this starvation test be carried beyond forty-eight hours. No degree of starvation will cause a decline of temperature in bacillary dysentery and in most of the parenteral infections. There may be some let-up in the diarrhea, but any improvement noted is very slight.

It is characteristic of bacillary dysentery and some forms of protozoan dysentery, notably amebic, that blood appears early in the stool.

Blood in the stool is not an infrequent accompaniment of many parenteral infections. It is characteristically absent from even the worst forms of acute intestinal intoxication.

The differentiation between true enteral infectious diarrhea and the diarrhea due to parenteral infection, is difficult, and one is often puzzled as to which condition really exists. Only the most painstaking physical inventory and establishment of the parenteral focus of infection will settle the question.

In the enteral diarrheal disturbances it is important to recall the location of the pathological bowel changes.

In enterocatarrh and intestinal intoxication, all bowel pathology is confined to the small bowel from the duodenum to the cecum.

The lesions are seldom deeply seated or destructive to the bowel lumen and its secretory structures. They are more in the nature of intense toxic irritations.

In the infectious diarrhea, the lesion may be distributed throughout the bowel; but in the majority of cases are predominant in the lower part of the latter.

The reaction to the food components is different in both conditions. Sugar is badly tolerated in all forms of enterocatarrh.

and intestinal intoxication. It is subject to a vicious and most rapid disintegration.

The products which reform are highly toxic. Along with this intolerance goes also an intolerance to fat. Only protein is well borne, and has even the effect of being a powerful agent to curb the mischief which is going on.

All the components are well borne in infectious diarrhea. The less useful is possibly protein, and to some extent fat. Carbohydrate is excellently borne in infectious diarrhea and should by all means be adequately contained in any food mixture used in this condition.

The situation in parenteral infection is similar, and even more favorable as regards tolerance to food components than it is in infectious diarrhea.

There is strictly no lesion in the gastrointestinal tract.

The digestive functions are essentially intact and there is no reason why food should be withheld, or the mixtures given modified to any considerable extent.

Any one of the three conditions—enterocatarrh, or intestinal intoxication, if repetitive; infectious diarrhea, if badly treated; or parenteral infection, if persistent or undiscovered—will lead to the wellknown state of athrepsia.

The practical problem in athrepsia is the complete loss of tolerance to all food components, and with it, the loss on the part of the organism to adequately utilize water for its cellular functions.

There lies back of it all a serious derangement of the cell structure itself, largely concerned, no doubt, with its protein structure and its mineral content.

Some of the facts, reflections and theories mentioned, permit, I believe, a practical application to the problem of feeding in alimentary disorders, and furnish the explanation for the use of various celebrated food mixtures now so successfully and generally used.

It is notorious that cow's milk mixtures, or milk from other animals if rich in fat and high in buffer value, will not agree in the infant troubled with persistent vomiting.

The situation promptly becomes peaceful if you resort to fat-free milk and reduce the buffer value of the milk by the addition of a suitable acid, preferably lactic, or give a milk naturally containing this general composition and characteristic.

Buttermilk mixtures and the acid milks such as lactic acid milk or hydrochloric acid milk meet these requirements, and are successfully used in these conditions.

In enterocatarrh and intestinal intoxication the choice of food mixture will be one containing much protein and very little carbohydrate and fat. Such a mixture will be inimical to excessive bacterial action in the small bowel, with resulting fermentation and carbohydrate breakdown and will favor the development of firm stools, thus checking the fatal dehydration.

Protein milk, buttermilk and skimmed lactic acid milk, without carbohydrate, or with moderate additions, will meet the demand for this type of disorder and will, in surprisingly short time, restore conditions to normal and again permit, with safety, the liberal use of the indispensable carbohydrate component.

The treatment of infectious diarrhea and of diarrhea due to parenteral infection is quite similar as regards choice of food mixture.

In infectious diarrhea, the seat of the disorder is seldom in the small bowel. The same is true of many forms of dysentery due to protozoan infestation. In parenteral infection the active cause of the diarrhea is extraneous to the gastro-intestinal tract.

For this reason there is no decided reason for making much change in the food mixture and there is particularly no reason for markedly diminishing the carbohydrate component or withholding it altogether. It is not desirable to produce a firm stool; for this reason, high protein content of the food is not desirable.

The buttermilk mixtures and full strength lactic acid milk with liberal carbohydrate additions will prove to be very useful mixtures. The malt soup of Czerny-Keller is also very good.

The results are not so favorable with plain milk mixtures, and in infectious diarrhea very unfavorable with too early or injudicious use of solid foods.

The athreptic infant presents the same problems, depending upon what type of enteric or parenteral disturbance he has, with this difference, however, that his tolerance line for any food component is at a very low ebb and his tissues seemingly lose the ability to utilize water.

It is well to keep the volume of food low. In exchange for this caution, one can, how-

ever, give very high carbohydrate percentages and high protein content in the food mixture.

No artificial food mixture will, however, give as certain and safe a result in the athreptic case as will exclusive breast milk feeding.

The adequate administration of fluids in any alimentary disturbance accompanied by vomiting, or diarrhea, or both, is of the greatest importance. The gravest and most fatal disturbance in the acid-base equilibrium of the tissues will occur if this is not done.

In the dangerous stages of the disease it is of far greater importance than the administration of any food component.

Careful consideration of the fundamental factors mentioned and their correlation to the problem of acute alimentary disorders, will, I believe, enable one to satisfactorily analyze and accurately differentiate such disorders.

It will furthermore give clear cut indications for treatment which will give results that cannot only be confidently expected, but can definitely be predicted.

DISCUSSION

Dr. Frank Van Schoick (Jackson): I should like to have the doctor tell me the reason for the presence of blood in a parenteral infection. I can very well see the cause of the presence of blood in an enteral infection. Why there should be blood in the parenteral infection is a thing that puzzles me.

D. F. W. Schlutz (Minneapolis, Minn.): We have the impression that in the parenteral infection, if there is blood present, there possibly has been, to some extent, an invasion of the intestinal tract by the same organism that is present in the original focus of infection. I think there has been some bacteriological research done on that. I cannot recall the author or the time or the place where it has been done, but I think there has been definitely shown the connection between the mastoid infection, which has been stressed by the St. Louis school, and a similar organism in the intestinal tract. There is a type of the colon group that I think is quite similar in both conditions. I don't know how correct that is, but if that is a fact that can be attested by further experimental work, it is rather interesting. It bears out, I think, what I said at first, that we have the feeling when we do have blood there is that added complication that the focal infection, the parenteral infection, has, among other places, extended to the bowel tract. I might say,

however, in my experience, at least, the appearance of blood in the stool with a parenteral infection is a comparatively rare thing.

I always have the feeling, when I do find much blood in the stool in an acute alimentary disorder, that I am dealing with bacillary dysentery. You do have the parenteral infection extremely severe. It seems to be more the mastoid type of infection than any other. That is our experience at Minneapolis, and I believe that bears out what they have found at St. Louis. I don't know why we see more of that condition than we did formerly. I am in a rather fortunate situation in this way, that on account of my age and the length of time I have been in pediatric practice I have passed through the stage when we did not have these things and got our babies well, to the stage where now they talk about it so much and they seem to have a good deal of it. I don't know what has happened. Something has happened in between there.

Formerly we lost few cases, yet we did not operate on the mastoid. Now we are seemingly compelled to resort to radical procedure. I cannot give an explanation for that. However, it seems to be true that we do not have peace in some of those cases and do not seem to save those cases unless we do operate. I am extremely conservative on that point. By no means am I ready to fully endorse the extreme ultra-radical realm that operates on sight, as it were.

Dr. A. Joseph Himmelhoach (Detroit): Parenteral and enteral infections are the same thing, perhaps. You said that all the parenteral infections are above the neck and are responsible for the diarrheas. Here we have a path which is directly connected with the gastro-intestinal tract. If it is in the mastoid there is drainage through the Eustachian tube. Why isn't it entirely conceivable that, especially with the factor of blood in the stool, the thing is actually of enteral infection and not secondary to a parenteral infection?

Another question that I should like to ask is the incidence of bacillary dysentery in Minneapolis. Do you routinely culture the warm stool and attempt to recover the bacilli? If so, how often are you successful? In Detroit we have had a number of cases of what should have been bacillary dysentery clinically, with no recovery of organism from the stool.

Dr. F. W. Schlutz (Minneapolis, Minn.): You have the infection from these regions down. You really have a bacillary, parenteral and enteral. That combination commonly exists. We have comparatively little bacillary dysentery now. As to the difficulty in trying to recover the organism, I had an experience with a case that was sent up from El Paso, Texas. By the most exhaustive bacteriological study on the stool were we able to identify the organism. I was confident that that was what it was. The child made a remarkable recovery. We do not have it very much. We frequently have difficulty in recovering or demonstrating the organism that should be present. We do not, for instance, have much of the Shiga type of bacillus.

Dr. F. Miner (Flint): I should like to take this opportunity to thank Dr. Schlutz. I can safely say that no branch of medicine is more abused than in the treatment of enteritis in children by the use of cathartics and patent foods.

THE CLINICAL AND LABORATORY DIAGNOSIS OF ACUTE PANCREATIC NECROSIS*

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One of the most difficult upper abdominal conditions to diagnose is acute pancreatic disease. The diversified character of the symptomatology and the similarity of its clinical course to several other upper abdominal diseases renders it unusually elusive. To recognize acute pancreatic necrosis from purely clinical symptomatology is very difficult even in the hands of the experienced observer, yet it is not impossible. In the past years, innumerable methods have been introduced which deal largely with the determination of the functional activity of the pancreas, some of which have augmented the clinical symptoms and together have proven to be of great aid in establishing a diagnosis of acute pancreatic necrosis with any degree of certainty.

In Germany, where most of these methods have been advocated and practised, reports indicate that it is possible to establish a preoperative diagnosis in almost 85 per cent of all cases (Körte, Muller, Nordmann, Guleke, Dietrich). In contrast to such excellent results obtained by our German colleagues, we find that in other countries, particularly in the United States, the percentage of preoperative diagnosis of this condition has been less satisfactory. Some of our authors have pointed out that pancreatic necrosis is more prevalent in Germany and that both the surgeons and clinicians have a great deal of experience in its diagnosis and treatment. While that statement, no doubt, is true, yet we feel that the chief reasons for our failure to establish a preoperative diagnosis of acute pancreatic necrosis more often are as follows:

(1) We very seldom think of the pancreas as a source to produce an acute abdominal condition.

(2) We aren't universally employing the modern clinical and laboratory methods as practiced in practically all of the German clinics in either establishing the diagnosis of acute pancreatic necrosis or excluding it in cases where such a condition is suspected.

That a diagnosis and particularly an early diagnosis is essential to avoid a high mortality is indicated by reports of Körte and

Stephan, who have shown that when the patients are operated on early, the mortality ranges between 45 and 55 per cent but when operation is performed 2 to 3 days after the onset of the disease, the mortality is almost 100 per cent. Contrasting the mortality of the United States and Germany we were very much surprised to find that in the former the mortality still ranges between 80 and 90 per cent, while in Germany it has been reduced to 50 to 60 per cent. It is for this reason that we are presenting this paper with an effort to introduce the most common clinical findings and laboratory methods of investigation which have proven to be almost pathognomonic of acute pancreatic necrosis.

Clinically, the patient presents a history of minor attacks of pain coming on during or immediately after a meal which have been diagnosed either as gall-bladder disease or stomach trouble. These attacks may date back for a number of years. The severe attack comes on suddenly and as Guleke points out, usually in middle-aged obese individuals after or during a rich meal or indulgence in excess drinking of alcoholic beverages. Although it is true that acute pancreatic necrosis is usually found in middle-aged or aged individuals, yet we must say that in our experience it is just as frequent in younger individuals. Our youngest patient was a 15 year old girl and Guleke reports a typical case of acute pancreatic necrosis in a 3 year old child. While obesity and alcohol are definite predisposing factors in the production of acute pancreatic necrosis, yet we feel that it is just as common in patients who are thin and not exposed to habitual drinking of alcohol.

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PAIN A MOST CONSTANT SYMPTOM

The most constant symptom of acute pancreatic necrosis is pain. It usually localizes, at the onset of the attack, in the epigastrium and later increases in intensity very rapidly. The one thing which characterizes the pain as "pancreatic pain" is not the type or degree of severity but rather its radiation. Most observers agree that the pain radiates to the left hypochondrium along the left costal margin towards the left shoulder and kidney region. The pain, although at times intermittent and mild at first, later becomes continuous and very severe. Accompanying the pain there is usually nausea and vomiting.

The appearance of the patient is not always characteristic. In severe cases the patient shows all the signs of shock, the face is very pale and at times slight cyanosis of the lips may be noted. These findings are, without a doubt, due to the poisonous effect upon the body through the toxic products produced by the necrosis of the pancreas, as shown by Guleke and Bergmann through a series of experiments on dogs.

The pulse is at first regular, later becoming weak and thready; the temperature is either normal or slightly elevated, in severe cases subnormal. The abdomen is at first slightly distended, usually limited to the upper part of the abdomen. The distention and tenderness of the abdomen, however, is never so severe and marked as found in cases of peritonitis particularly due to a perforated ulcer of the stomach. Katsch calls attention to the Head's zone which is always found and characteristic of acute pancreatic necrosis. This zone runs from the epigastrium towards the left under the left costal margin and it consists of an area of skin sensibility produced by crossing a needle back and forth from the center of the epigastrium along the left costal margin. We also have been able to demonstrate this finding in most of our cases of pancreatic necrosis. In addition Körte finds a resistant area in the upper abdomen which entails the normal anatomical position of the pancreas.

LABORATORY INVESTIGATION

Far more important than the symptoms and clinical findings in the diagnosis of acute pancreatic necrosis are the laboratory methods of investigation. It is recognized by all observers today that in order to establish a diagnosis with any degree of certainty, one must determine the chemical function of the

pancreas. In the past 20 years, various methods have been introduced which largely dealt with the determination of the changes of the internal and external secretions of the pancreas. Some of these methods, such as the determination of glycosuria and hyperglycemia have been discarded, for they have proven to be too uncertain. Only 20 to 30 per cent of the cases of pancreatic necrosis show an abnormal amount of sugar in the urine and blood. The characteristic changes in the feces which usually take place in pancreatic necrosis are of no practical value in establishing a diagnosis of pancreatic necrosis as in the latter case there is considerable difficulty in obtaining a stool specimen. What was needed were methods which would enable us to establish a diagnosis in cases where the pancreas was only mildly involved and particularly in surgical conditions of the pancreas where a quick and exact method was necessary to determine whether there was an indication to operate. The methods advocated by Wohlgemuth in determining the amount of diastatic ferment in the urine and that of Rona in determining the lipolytic ferment in serum, answer the above requirements.

The determination of the diastatic ferment in the urine according to Wohlgemuth is based on the observation that normally the ferment is present in the serum and urine in certain quantities. When, however, we are dealing with a condition of the pancreas such as acute pancreatic necrosis where there is a destruction of pancreatic tissue, there follows an absorption of the diastatic ferment and thereby an increase in the blood and urine in abnormal quantities.

Already in 1863 J. Cohnheim was first to show and isolate the ferment in the urine but not until 1908 when Wohlgemuth described his method of determining the quantitative value of the ferment in the urine was the method recognized as of diagnostic value in establishing a diagnosis of pancreatic necrosis. Löffler regards the value of the diastatic determination in the urine in pancreatic disease equal in importance to the determination of the icteric index in liver disease.

In the laboratory, the method is carried out in the following procedure as recommended by Wohlgemuth:

(1) A series of 10 test tubes are arranged on a test tube stand.

(2) One c.c. of the urine to be examined

is then placed in test-tubes 1 and 2.

(3) One c.c. of 1 per cent salt-solution is then placed in all the test tubes except the first one.

(4) The contents of the second tube, containing 1 c.c. of urine and 1 c.c. of salt-solution, are thoroughly mixed with a pipet and 1 c.c. of this mixture is removed and placed in the third test-tube. The process is repeated in the third tube and 1 c.c. of the mixture is removed to the fourth tube, and so on until it reaches a value of 511/512 in the last tube.

(5) Two c.c. of a fresh 1 per cent starch solution is then added to each test tube.

(6) All the test tubes are then placed in a water bath for twenty minutes, kept at a constant temperature of 38° to 40°.

(7) The tubes are then cooled and to each test tube is added several drops of a N 1/50 iodin solution.

(8) The addition of the iodin causes the appearance of different colors in the test tubes; the tube showing the first appearance of the color "blue" is taken as the borderline and the calculation of the diastatic value is made from the tube immediately before it.

The following table and explanation will illustrate the mechanism and interpretation of this method.

		Amount of		Starch solution	Solution	Color	D.U.
Amount of NaCl after mixture	urine after mixture	1 c.c.	2 c.c.				
1. 0 c.c.	1 c.c.	2	1/50	yellow	2		
2. 1/2	1/2	2	1/50	yellow	4		
3. 3/4	3/4	2	1/50	red			
				yellow	8		
4. 1/8	1/8	2	1/50	red			
				violet	16		
5. 10/16	1/16	2	1/50	blue	32		
6. 31/32	1/32	2	1/50	blue	64		
7. 63/64	1/64	2	1/50	blue	128		
9. 255/256	1/256	2	1/50	blue	512		
10. 511/512	1/512	2	1/50	blue	1024		

The principle of the method is based on the fact that normally the diastatic ferment will split the starch to some form of dextrin and upon the addition of iodin the color will turn from yellow to red, showing that the ferment was present and splitting of the starch has taken place, for if the diastatic ferment was absent the "blue" color will always appear upon the addition of iodin to starch showing that the starch was not split.

In the above example of a normal urine, test tube number four was the last one to show the presence of the ferment and starch splitting. This tube is therefore taken as the

one from which the amount of diastatic ferment is to be calculated. The last six tubes show a blue color indicating the absence of the ferment and therefore no starch splitting. When we are dealing with an abnormal urine in which the diastatic ferment is present in large quantities, the splitting of starch will continue to take place lower down in the series, thereby increasing the diastatic unit.

DIASTATIC UNIT

Wohlgemuth defines a "Diastatic Unit" as that amount of starch solution which will be split up by 1 c.c. of urine under definite conditions such as time and temperature. In the above example the calculation is made as follows:

1/8 c.c. urine splits 2 c.c. of starch solution.

1 c.c. urine splits 8x2 or 16 D.U.

In normal individuals the value of the diastatic ferment ranges between 8 and 64 D.U. Most authors agree that anything above or below the above figures is to be regarded as pathologic.

With this method as advocated by Wohlgemuth, we examined 237 cases with various abdominal conditions. Of these we found 15 cases with acute pancreatic necrosis of which 11 were operated on. The diastatic reaction was always positive in all 15 cases, the diastatic value varying between 320 and 2000 units. After the recovery the reaction was always repeated and we found normal results in all cases.

Particularly interesting are three cases which we had an opportunity to observe for several weeks during their attacks. We noted that during an attack the diastatic value always increased (600 units to 1000 units) and gradually reaching a normal value after the attack has subsided.

In one case after an operation for acute pancreatic necrosis, the patient was observed on several occasions with a typical clinical picture of acute pancreatic necrosis and yet the diastatic value in the urine always remained within normal limits. Of course we are unable to say definitely that we were dealing with a recurrent acute pancreatic necrosis.

In many cases of severe cholecystitis and cholelithiasis, we also found a slight increase of the diastatic value in the urine without being able to demonstrate even a mild pancreatic necrosis. Most of these

cases showed some form of obstruction either in the papilla or in the bile ducts which led to a retention of the pancreatic secretions, thus causing an entrance of the pancreatic ferments into the blood and finally appearing in the urine.

In two cases we found a definite increase of the diastatic value in the urine (320 units) without pancreatic necrosis. One case was tuberculous peritonitis which was operated; the other case was an acute pelvic peritonitis. We are at a loss to explain the increased diastatic reaction in these cases.

In the remaining cases of acute and chronic abdominal condition, the diastatic value was always normal.

The diastatic value varies in the same individual, but the variation is always within normal limits. Wohlgemuth recommends the examination of several specimens of urine as he has shown that there is a slight increase in the diastatic value in fasting individuals, while after a meal there is a decrease but after 3 to 4 hours there is a gradual increase to normal again.

Skoog emphasizes very strongly that the temperature must remain between 35° and 40°. He has shown that when the temperature is below 30° or above 40° the results are valueless. He has also shown that concentration or dilution of the urine has very little effect upon the results.

Roseno found that in very severe cases of acute pancreatic necrosis, where the entire pancreatic gland is destroyed, no diastatic ferment is found in the urine.

It is further to be noted, as indicated by Schmerel, that in nephritic and diabetic patients, the diastatic value in the urine is always decreased. This fact should always be taken into consideration when the urine of such a patient is examined for diastatic reaction.

The determination of the pancreatic lipolytic ferment in the serum was first advocated by Rona in a series of excellent experimental observations on pancreatic ferments. He has shown that the serum of normal blood contains lipolytic ferments which may be destroyed and rendered inactive by the addition of a chemical agent, such as atoxyl, while the pancreatic lipase, on the contrary, is destroyed and becomes inactive when quinine hydrochloride is added while it is resistant to atoxyl.

He also makes use of the fact that the number and size of the drops of a known

volume of fluid is dependent upon the surface tension of that fluid. He has shown that the number of drops is in inverse proportion to the size of the drops which is directly proportional to the surface tension.

In the laboratory the method is carried out in the following manner:

(1) To a liter of distilled water, 5 drops of a freshly prepared solution of tributyrates is added and shaken continuously for one hour and then filtered.

(2) About 25 c.c. of blood is removed from the suspected patient and centrifuged for twenty minutes; the serum is removed in a separate container.

(3) A buffer solution is then prepared consisting of 1 c.c. of primary sodium phosphate and 14 c.c. of secondary sodium phosphate. This mixture should give a P_H value of 7.6.

(4) Two separate mixtures are then prepared.

- (a) Three c.c. serum
 " " tribut. solution
 " " buffer " " " " " "
 One " atoxyl
- (b) Three c.c. serum
 " " tribut. solution
 " " buffer " " " "
 One c.c. distilled water.

(5) An equal and known volume of each mixture is then taken up in a Rona tube and the number of drops counted after 5, 30, 60 and 90 minutes.

Explanation:

If we mix 3 c.c. of serum with 3 c.c. of tributyrates solution the following reaction takes place. The normal lipolytic ferments present in the serum will split the tributyrates solution causing the surface tension to increase and thereby an increase in the size and a decrease in the number of drops present in a known volume of the mixture. So if we had counted 120 drops in a known volume of serum before adding the fatty solution, it will have about 90 drops after adding the tributyrates solution. If to the mixture of 3 c.c. serum and 3 c.c. tributyrates solution, 2 mg. of atoxyl is added, we find that the number of drops in the same volume will remain the same in the course of 1½ hours because atoxyl destroys the lipolytic ferments present in the serum, the fatty solution will not be split up and the surface tension will remain the same.

	Before adding Tributyrate	After adding Tri- butyrate solution		
		60	30	90
Normal Serum Tributyrate solution	120	102	102	100
Normal Serum Tribut. Sol. 2 mg. Atox.	120	119	119	119

If, however, we are dealing with an abnormal serum of a patient suspected of acute pancreatic necrosis, we find that the number of drops in the same volume of mixture will still decrease in spite of the addition of 2 mg. atoxyl, showing that there must be a lipolytic agent present in the serum which is foreign and one which is resistant to atoxyl. It is apparent that this foreign lipolytic ferment continues to split the fat solution, the surface tension is increased and the number of drops is decreased. The only lipase known to resist atoxyl is the pancreatic lipase, which is present in the blood only when the pancreas is acutely diseased.

	Before addition	After addition		
		30	60	90
Abnormal Serum Tributyrate Solution	120	105	102	100
Abnormal Serum Tributyrate Solution 2 mg. Atoxyl	120	108	100	96

The difference in the number of drops varies with different cases but for practical purposes, most observers agree that, if at the end of 90 minutes a difference of at least 8 to 10 drops is noted, the case under consideration is to be regarded pathological. With this method we examined 80 cases of various conditions of the abdomen of which 8 cases had an acute pancreatic necrosis. In all of the 8 cases the reaction was positive; in the remaining cases, negative. It appears that this method is more exact and finer than that of Wohlgemuth, nevertheless we are using the diastatic reaction almost exclusively at present for it is more simple and it doesn't require much time. However, we use Rona's method in cases where the diastatic reaction is normal

and yet a pancreatic necrosis is suspected. The method is used only as control. Several authors have noted and reported cases of pernicious anemia where there was a marked autolysis of the red blood corpuscles and the setting free of lipolytic ferments which are also resistant to the addition of atoxyl. It is therefore essential to rule out pernicious anemia in patients suspected of pancreatic necrosis. Fortunately, the two diseases very seldom occur simultaneously.

CONCLUSION

Both laboratory methods have, in our experience, proven to be very dependable. For practical purposes, however, we are much in favor of Wohlgemuth's method to determine the diastatic value in urine for it is more rapid, simple and even the inexperienced individual can carry it out with little instruction. It is further to note that in our experience as well as that of other observers, no absolute relationship can be established as to the severity of the disease from the strength of the reaction. We have seen, not infrequently, that in mild cases of acute pancreatic necrosis, a much higher diastatic value is found than in severe cases, and vice versa is also true. The reactions only show that we are dealing with a pancreatic disease, but as to whether the case is operative or not, we must also take the clinical symptoms and findings into consideration. 567 Fisher Building Detroit, Michigan.

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THE SPHENOPALATINE TEST

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The sphenopalatine test differs fundamentally from tests made with the microscope, the test tube, or the X-ray, this difference lying in the fact that the patient gives the answer—the patient, not the doctor, who reads the dial. It is like other scientific tests, however, in demanding that, if the results are to be trusted, all possible precautions must be taken to guard against error. The object of this paper is to go over some of the most necessary precautions in applying the sphenopalatine test in order to avoid faulty conclusions.

Briefly the author's technic is as follows:

Armamentarium: an applicator, absorbent cotton, adrenalin, and butyn. The applicator is of aluminum, and slender, with about a centimeter of the handle bent to a right angle, and about two centimeters of the tip subjected to heat for pliability. The cotton should be of long fiber; the adrenalin, 1/1000; and the butyn a 50% aqueous solution.

A pinch of cotton is wound upon the tip of the applicator into a smooth, compact spindle about five millimeters in diameter at the center. This is dipped into the adrenalin and squeezed dry between the forefinger and thumb so as to flatten it in the same plane with the bent handle. At the same time the tip is bent to an angle of about thirty degrees in this plane. Two drops of butyn are added, and the applicator is now ready to be placed.

Standing on the right side of the patient, with the left forearm resting upon the patient's head and the left forefinger slightly raising the tip of the nose, the operator introduces the applicator, coaxing it along the floor of the nose or wherever its passage is found to be easiest, to a depth of about two and three quarter inches, when it will be felt to come into the open space of the naso-pharynx. The curved tip is now rotated outward to an angle of about forty-five degrees, when it makes contact with the pharyngeal wall. It is left in this position for about five minutes, close watch being kept during this time to see that contact with the wall is continuous, when anesthesia of the sphenopalatine ganglion should be complete.

Caution: During this process close observation should be made of an untried patient and should any pallor, nausea, or other untoward symptom supervene, the test should be immediately discontinued.

In making this test it should be remembered that we are abandoning for the time the shot-gun approach, and using an instrument of precision. With our customary medical procedure of examining a number of symptoms *en masse* and applying therapeutic measures *en masse* it is well-nigh impossible to determine with scientific accuracy the effect of individual factors. The sphenopalatine test, on the other hand, lends

itself to the examination of one factor only, which, indeed, is the essence of the scientific approach: the consideration of only one factor at a time—no more.

The one factor examined in the sphenopalatine test is excess efferent current routed via the sphenopalatine ganglion. The test is based upon the *theory of pathological currents*, or, in its biological aspect, the *hypothesis of current energy*. This theory postulates that the *efferent* nerve currents flowing out from the brain and being distributed radially to all parts of the body to "motivate and stabilize the various physiological functions,"¹ may upon occasion be produced and distributed in abnormal quantum, and that whenever this is the case the various functions which are being motivated will be overmotivated or undermotivated and converted into dysfunctions. In other words, efferent currents in excess, registering in this tissue or that, may and do engender and motivate dysfunctions, the particular kind of dysfunction depending upon where the excess currents are registering. Thus, an excess current registering in the eye produces a different sort of dysfunction from one registering in the sciatic nerve; an excess current registering in the heart produces a different kind of dysfunction from one registering in the lumbar muscles. But in any case the dysfunction engendered, whether it be glaucoma or sciatica, angina pectoris or lumbago, is engendered by excess efferent currents, and motivated by such excess efferent currents, and must cease when the motivating currents are withdrawn. It is these excess efferent currents that are known as *pathological currents*. They differ from normal efferent currents quantitatively, but not qualitatively. Stated in the form of an equation: As efferent currents in normal quantum are to

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physiological functions, so efferent currents in abnormal quantum are to dysfunctions.

Since, according to this theory, local dysfunctions are engendered and motivated by efferent currents, in order to arrest such dysfunctions, it is only necessary to intercept the motivating efferent current before it reaches the locus of distress. In other words, to arrest sciatica, asthma, angina pectoris, it is only necessary to turn off a switch somewhere along the current path between the locus of distress and the brain.

Now that is exactly what the sphenopalatine test is—it is the turning off of a switch in the presence of some dysfunction to see if the dysfunction or symptom can be thus arrested. From the patient's standpoint, *we are trying to arrest the symptom*, but from the standpoint of research, *we are trying to determine whether the efferent current that is motivating the symptom is routed via either sphenopalatine ganglion; and if so, which, the right or the left.*

To illustrate this, let us take an actual case. Case No. H955, Jefferson Clinic, gives a history of having been operated upon a year ago for right inguinal hernia. Ever since that time he has had distress in the right inguinal region, a good deal of pain and some soreness. When he was recently referred for the test, the left sphenopalatine ganglion was anesthetized, whereupon the pain and soreness immediately disappeared. He could now bend, stoop, and go through all sorts of contortions without bringing on a trace of the pain. On his chart it was noted: "The inguinal distress caused by efferent currents routed at present adown the left trigeminal nerve, and via the left sphenopalatine ganglion."

Two cases of sciatica from the records of the Jefferson Clinic represent another phase of the test. The one (H3260) came into the office walking with great difficulty. His sciatica had persisted constantly for six months. The left sphenopalatine ganglion was anesthetized, and in some five minutes or so the pain was entirely gone, so that the patient could now walk, bend, and twist his body without provoking so much as a twinge. The test told us that the actuating current was routed down the left trigeminal nerve, via the left sphenopalatine ganglion. (Here it may be noted that rheumatoid symptoms are more commonly routed adown the left ganglion, while asthma is more commonly routed adown the right.)

But all cases of sciatica do not respond as happily as this one did. In the other case, F667, for a minute or two the patient thought his pain was getting better, but by the time the test was completed (five minutes) the sciatic pain was as acute as before. The test was now applied on the right side, but with no better results. It was obvious that the record on his chart would have to be that the current actuating the sciatica was not routed via either sphenopalatine ganglion.

THERAPEUTICS

But the sphenopalatine test may be made to serve therapeutic purposes. Experience has shown that after the actuating current is once intercepted, in some instances it never returns. This is true particularly in the case of lumbago. It is the rule rather than the exception that anesthetizing the left sphenopalatine ganglion in the presence of lumbago immediately and completely relieves the pain, and, furthermore, it rarely returns. This procedure, since its introduction at Eloise a few months ago, has become standardized there in the treatment of lumbago. Dr. Saunders informs me that it is an eminently successful therapeutic device in fully three-fourths of the cases.

In other cases the procedure has to be repeated once, twice, or even three or more times. The case of sciatica above mentioned (H3260) was completely and permanently relieved after three anesthetizations.

WHEN ALCOHOL INJECTION IS INDICATED

In still other cases the ganglion may be anesthetized and the symptom arrested again and again, but still it persists in returning with little or no improvement. In this type of case, after a sufficient number of tests, always followed by temporary relief, it is expected that injecting the strategic ganglion with alcohol will make the relief permanent. Thus the sphenopalatine test is our guide as to when an alcohol injection of this ganglion is indicated.

A notable case of this kind was one of chorea (reported in Archives of Otolaryngology, February, 1928) involving the left arm and leg, and of some six years duration. It was found that anesthetizing the left sphenopalatine ganglion would give relief for four hours, but that the malady would always return, little or no better than before. At length, after a dozen or so tests,

always with uniform results, the ganglion was injected with alcohol, and the affliction was immediately, completely, and permanently relieved.

TESTING FOR DETOURS

When a sphenopalatine ganglion is anesthetized with butyn it is impervious to the passage of currents for three or four hours. If a symptom is arrested and returns in less than that time, it is obvious that the current has found some by-path to the locus of distress—in other words, it has *detoured*. A good illustration of this was in the case of Mrs. M.,² who had been confined to bed for several days with a rheumatoid distress involving the lumbar region and extending down the right sciatic nerve. The test applied to the left sphenopalatine ganglion gave what appeared to be complete relief. But the relief was very short-lived, the pain returning in one to two hours. Since the pain returned while the ganglion was still impervious to the passage of currents, it was obvious that the actuating current had established another path—had detoured the obstruction. It was not surprising, therefore, to find that subsequent attempts to arrest it through turning off the switch at the left sphenopalatine ganglion were unsuccessful. Once a detour is established, it is not worth while to make any further attempt to control a symptom by the sphenopalatine test.

Another type of detour presents itself—one that comes on more gradually. For example, a case of iritis was found to be completely relieved of its pain at the first anesthetization of the ganglion, and the relief lasted the full four hours. But in subsequent tests the relief was not quite so complete, and the return a little more prompt, till at last a stage was reached in which anesthetizing the ganglion gave no relief whatever. This has been observed in a number of cases, especially where the eyes and ears were involved.

Still another type of detouring has been encountered, as illustrated by the following case: Miss B. had asthma of several years duration. It was found that anesthetizing the right sphenopalatine ganglion during an attack gave complete relief. The test was repeated on several occasions, always with uniform results. At length, since no tendency to detour exhibited itself, the ganglion was injected with alcohol, in the

expectation of complete and permanent relief, as in the case of chorea mentioned. The relief followed as expected, but lasted only a few weeks. The question arose as to whether the ganglion had prematurely opened up to the passage of currents or whether the currents had detoured the obstruction. The sphenopalatine test afforded a ready answer. If it were a case of the ganglion prematurely admitting the passage of currents, then anesthetizing the ganglion during an attack would relieve the asthma as before. But it was found that anesthetizing the ganglion now gave no relief whatever. This showed that the injection was still holding, but that the currents had detoured the obstruction.

TESTING ONE'S TECHNIC

The sphenopalatine test may be used to check up one's technic, as the following case illustrates: Chas. W., on the service of Dr. Ryerson, at Eloise, had asthma of twelve years duration. It was found that anesthetizing the right nasal ganglion during an attack relieved it entirely. After repeating this test several times it was decided to inject the ganglion with alcohol in the expectation of more permanent relief. But in a few days the asthma returned as before. The sphenopalatine test now arrested it again, showing that the injection with alcohol had been faulty. A second injection was made, but the asthma returned a second time and was again found arrestible by the sphenopalatine test, which showed that even the second injection had missed its mark.

This is an extremely important point, since these injections were made through the posterior palatine canal—a technic not supposed to miss the ganglion.

NEGATIVE CASES

Positive information may often be had from even negative reactions. In a case of Dr. Ryerson's, the patient was suffering from excessive lachrymation, even to the extent of excoriating his cheek. There are two paths by which the exciting current might reach the lachrymal glands: via the sphenopalatine ganglion, and via the ophthalmic nerve. The ganglion was anesthetized, but without effect upon the lachrymation. This told us that the exciting current was not routed via the ganglion at all, and it told us just as certainly that this current *was* routed via the only alternative path,

namely, the ophthalmic nerve. Upon the basis of this test, but without any guiding precedent in the history of medicine, the ciliary ganglion was injected with alcohol, with the result that the lachrymation was immediately, completely, and, I might add, permanently arrested.

AUGMENTING SYMPTOMS

It is not to be inferred that the sphenopalatine test does no more than merely arrest a dysfunction or fail to arrest it. The sphenopalatine test is not an entirely innocuous procedure. In every case it redistributes the current energy of the organism, creating a region of lower current tension distal and higher tension proximal to the point of interception. Sometimes this raising of the tension on the proximal side results in the augmentation, or even initiation, of dysfunctions. For instance, Sluder⁴ long ago observed that deep temporal headache was never relieved by anesthetizing the sphenopalatine ganglion, but on the contrary was frequently augmented, and sometimes initiated outright. The reason is obvious, since the deep temporal nerves arise in the proximal region where current tension is raised by applying the sphenopalatine test.

THE SPHENOPALATINE TEST AND BLOOD PRESSURE

That there is an intimate relationship between currents passing the sphenopalatine ganglion and the circulatory system has been already shown by the arrest of such circulatory dysfunctions as agina pectoris, tachycardia, and Berger's disease (Chester). Even more clearly is this relationship shown in the case of blood pressure. Not only has the sphenopalatine test been shown sometimes to reduce the systolic blood pressure as much as thirty-five mm. Hg. in ten minutes, but also sometimes to increase the systolic blood pressure as much as twenty-five mm. Hg. in the same time. Moreover, through the sphenopalatine test the synchronism heretofore supposed to exist between the systolic and diastolic pressures has been completely disproven—the same test raising one and lowering the other.

SCIENTIFIC USEFULNESS OF THE SPHENOPALATINE TEST

Enough has already been seen to indicate that when Sluder⁴ in 1903 intercepted a passing current and arrested a remote dysfunction he opened a field of the first mag-

nitude: the investigation of sensory, motor, secretory, respiratory, and circulatory dysfunctions by the interception of the efferent current energy that actuates them.

The scientific usefulness of the sphenopalatine test lies in the development of this field. It was with the sphenopalatine test that the field was opened. It has been through the sphenopalatine test that the unexpected extent of the field has been disclosed to view. The sphenopalatine test is the instrument *par excellence* with which the physician will survey this field and stake out his claims to scientific disclosures.

Moreover, it is the sphenopalatine test, above all things else, that will steer him aright in his thought processes as he explores this field. For instance, when the sphenopalatine ganglion is anesthetized and pain in the eye, as from traumatic keratitis, is relieved, the first impulse is to suppose that the path of pain from the eye to the brain is via the sphenopalatine ganglion. If this were true, anesthetizing this ganglion would of necessity put the eye in a state of anesthesia, and indeed, injecting the ganglion with alcohol would keep the eye under anesthesia for several months. That such is not the case can be demonstrated by merely anesthetizing the sphenopalatine ganglion of anyone and then testing the cornea for sensitiveness with a few fibers of cotton. It will be found that with the ganglion under full anesthesia the cornea on the anesthetized side is just as sensitive as its fellow of the opposite side.

Familiarity with the phenomena associated with the sphenopalatine test and due regard for their import would have saved McClintic⁵ from the error that "eye pain is transmitted via the sphenopalatine ganglion, and not over the ophthalmic division of the V nerve," just as it saved Sluder,⁶ the original author of that error, from continuing in it.

THE SPHENOPALATINE TEST DEMANDS CAREFUL APPLICATION

The sphenopalatine test is an instrument capable of the highest scientific precision, comparable to the microscope and the test tube; but it makes certain demands upon the intelligence of the one who would employ it with exactness. Cases cannot be treated *en masse*, but each one must be studied individually for a period and carefully interpreted in the light of the facts disclosed by the test, and in the light of

anatomy. Above all, the mental attitude of the physician employing this test should be one of scientific caution. He should take all possible pains to avoid misreading the reaction, and recording it as positive when in reality the reaction is negative or only partial. Partial relief, or relief that does not last the allotted four hours, should always be carefully distinguished, since it gives evidence that the actuating current is reaching the dysfunction via an alternative route. In these cases, of course, attempts to arrest the dysfunction by blocking the sphenopalatine ganglion prove fruitless.

Not the least of the possibilities of error lies in questioning the patient, for be it remembered, in case of pain, vertigo, nausea, tinnitus, and all subjective symptoms, the patient *reads the dial*, and must report of the reaction. Before applying the sphenopalatine test it is of course necessary to inquire carefully whether the patient is suffering from the symptom in question *at the time*. Above all, it is necessary to make the patient understand just what part he is to play in interpreting the test. Otherwise, quite unintentionally the patient may give answers that prove entirely misleading.

CONCLUSION

The virgin field for medical and biological advance opened by the sphenopalatine test can be developed only by the practising physician. In this field the experimental subject is not a dumb, narcotized animal, unable to report on pain and other subjective symptoms, but the conscious human being, with senses and sensibilities unimpaired, who alone can report on sensory dysfunctions. Thus the realm of pain and subjective dysfunctions, which makes up the bulk of medical practice, is destined to be investigated, not by the laboratory man, but by the physician; for he alone is author-

ized to treat human afflictions. It is the sphenopalatine test that gives the physician a method of scientific precision with which to investigate the vast realm of *pain*, that cannot be touched in the laboratory.

One might be shocked at the thought of experimenting with pain in the conscious human patient, until it is realized that the method consists, not of producing pain, but of removing its cause, while the pathway of pain is still open, so that the pain ceases because there is nothing to report.

When we experiment with sensory, motor, secretory, respiratory, and circulatory dysfunctions in human patients we follow an entirely different method from that followed in the laboratory on experimental animals. Instead of producing artificial dysfunctions, we wait until actual dysfunctions present for treatment, and then, by intercepting the excess efferent current that has overmotivated them and made them dysfunctions, we restore the normal balance and convert them into normal functions again.

It will require at least a generation's work, not by a few individuals, but by the profession generally, before the possibilities of this method of medical and biological advance will be explored. At present the sphenopalatine test provides the means whereby every physician may not only increase his efficiency as a physician, but may begin to assemble data of high scientific value in advancing the frontiers of medicine and biology.

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MEDICAL PROFESSION OPPOSED TO PORTER BILLS

The medical profession of the country, through the Journal of the American Medical Association, is opposing the bills introduced into Congress by Representative Stephen G. Porter, of Pennsylvania, governing the use of narcotic drugs, on the grounds that the Porter bills would set up a federal narcotic dictator.

"The legislation proposed is in complete harmony with the prevailing tendency to substitute a powerful bureaucracy in Washington for the authority of the states," declares an editorial in a recent number of the Journal A. M. A. "If the Porter bills become law, a physician, dentist, veterinarian or pharmacist authorized by a state to practice his profession cannot use narcotic drugs in connection with his work until

a Washington bureau chief, under rules and regulations of his own making, says that he may. Autocrats of such a type have no place in the American scheme of government."

The editorial outlines the extensive power which would be given to the head of the proposed Federal Narcotic Control Board and urges physicians and all interested organizations to protest vigorously against the enactment of the proposed legislation.

"In the face of such a menace and with an understanding of the type of propaganda that will be behind the Porter bills, all the power that an intelligent people and particularly the medical profession can wield must be mustered to the defense of the right of physicians and related professions to practice for the good of man without further bureaucratic molestation," the editorial concludes.

—Science Service.

PERIODIC HEALTH EXAMINATIONS

ANNIE E. REYNOLDS, M.D.*

PORT HURON, MICHIGAN

The Woman's Benefit Association, a fraternal benefit society, with a membership of 250,000 women and children, has endeavored since 1923 to give each member a free annual physical examination.

In places where it has been impossible for the members to reach our examiners to receive this service free they are repeatedly requested to go to their family physician once or twice a year.

In 36 of the larger cities in the United States and Canada the Woman's Benefit Association has health centers open from 9 A. M. to 4 P. M. daily for the purpose of giving these examinations. Four of these are in charge of women physicians and the others in charge of nurses. Most of the nurses are registered nurses with years of experience in public health and hospital work. In several places the nurses have secured local physicians for one or two half days a week who examine the heart, lungs and pelvic organs. During each summer the members are brought in by the thousands to our Summer Camp on Lake Huron where each spends an average of two weeks. During this vacation the member is given her physical examination by a corps of physicians assisted by several trained nurses.

During the rest of the year a physician is sent from place to place through localities not served by health centers, spending one, two or more days in each town. Besides a lecture on periodical examinations and health subjects a temporary office is established and with the help of one or more nurses as many members are examined as possible. Three or four days before the doctor arrives a notice is sent out from headquarters to each member telling her of the opportunity of a free examination and stating time and place.

After weighing and measuring, each woman or child is told the normal weight for her height and age and how hers compares with this. If she is over or under weight, her diet and habits of eating are gone over to help her find and correct mistakes.

All symptoms of stomach or bowel trouble or digestive disturbances are searched for. If any abnormal condition is found or if she gives a history of pelvic trouble, she is referred to her family physician. If a surgical case is positively diagnosed an

appointment is immediately made with a surgeon.

Goiters are referred to the family physician or to a surgeon with arrangements made for follow-up reports.

Every woman with abnormal blood pressure is sent to her family physician and promises are secured from her that she will see him at regular intervals and that she will follow his directions until he tells her that her blood pressure is normal. It is interesting to note how many women from 48 to 52 years of age have high blood pressure and how many who have had pelvic operations or ovarian trouble have low blood pressure.

If either sugar or albumin is found in the urine or any symptoms suggesting kidney disease are discovered, the patient is sent to her family physician. She is also told her condition and assured she can be helped with care. She is impressed with the importance of following minutely her physician's directions. A promise is also secured from her to have a urinary analysis made at stated periods throughout the remainder of her life.

Heart and nerve cases are sent to the family physician.

If any abnormal condition of the lungs is found or any physical condition noted that would indicate possible tuberculosis she is taken by a nurse to a T. B. Clinic, specialist or sanatorium to be thoroughly examined and watched, and cared for.

All eye, ear, nose, throat cases are referred to specialists.

If one has not been to her dentist within six months or if she has a diseased condition of the mouth she is referred to her dentist. Each woman sees the physician in private and she is allowed to tell her ailments or ask questions. Of course no prescribing is done, simply examining, abnor-

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mal conditions noted, reports taken and members not in first class condition are referred to local physicians. Each woman is given a card health report.

We realize some do not keep promises but we have follow-up reports on hundreds who do.

The condition and report of the member at her next examination show the interest and benefit received from this work, and through reports from physicians, surgeons and specialists we learn that our efforts have not been in vain.

One interesting point is that women in

nearly every part of the United States and Canada where we have made these health surveys have their teeth examined and cared for often. Few acknowledge that they have not seen a dentist for six months. This would lead one to conclude that dentists have quite thoroughly convinced their patients of the need of regular examinations and prevention work.

These same women have not given this amount of attention to the rest of their bodies. The majority of these at their first examination seemed proud to state that they had not consulted a physician for years.

EFFECT OF DIFFERENT CARBOHYDRATES ON BLOOD AND URINARY SUGAR*

W. B. LEWIS, M.D. and R. P. BOND, A.B.

BATTLE CREEK, MICHIGAN

INTRODUCTION

Lactose and lactic acid preparations have been widely used in recent years to combat the toxemias resulting from the growth and development of unfavorable bacteria in the alimentary canal. This extensive use of lactose alone or lactose together with other carbohydrates, such as dextrin, has given rise to the question: Is there danger, by such use, of exceeding the carbohydrate tolerance of the individual and so doing harm? It was to obtain data on this question and to make a comparative study of a new commercial sugar, Beta Lactose,** that this work was undertaken.

It is interesting to note something of the historical development of our knowledge of urine and blood sugar.

As early as the year 1647 Thomas Willis recognized the presence of sugar in the urine of diabetics by its sweet taste. The presence of sugar in the blood of these patients was recognized by Dobson in 1775 (128 years after the recognition of the urinary sugar). His discovery was confirmed by Cullen the following year. Fifty-six years later, in 1831, Tiedemann and Gmelin¹ showed that sugar was normally present in blood after meals. In 1848 Claude Bernard² showed that it was normally present in the carbohydrate fasting animal, and in 1856 Chauveau asserted that sugar was a common constituent of the blood. Immediately following these important discoveries we have such men as MacGregor, Rollo, and Ambrosini giving us our first information of the dependence of glycosuria on hyperglycemia. Then tests for the assimilation limit for glucose and starch were

developed by Schmid and Becker, Schiff, Lehmann, Frerichs, and others.

From this time on, we have an increasing volume of information regarding the blood and urinary sugar—how they are influenced by diet and starvation and by various forms of sugars. Methods of analysis also have undergone their evolution and to date we have various methods which are both simple and accurate and adaptable to the needs of anyone wishing to do work along this line, whether he be practising in a somewhat isolated region or in connection with a large hospital.

PLAN OF EXPERIMENTS

Our routine procedure for a glucose tolerance test³ is as follows: 1. At 7:00 A. M. the bladder is emptied, the urine discarded, and a glass of water is taken. 2. At 8:00 A. M., one hour specimens of urine and fasting blood sugar are obtained. Patient is then given 100 gm. of pure dextrose dissolved in water with the juice of one lemon and made up to 200 c.c., also one glass of water. 3. At 8:30 A. M.,

*From the Department of Clinical Laboratories, Battle Creek Sanitarium.

**Produced by the Battle Creek Food Company, Battle Creek, Michigan.

blood and urine specimens are obtained. 4. At 9:00, 10:00, 11:00 and 12:00 o'clock, blood and urine specimens are collected.

Each of two subjects was given this test in order to determine that they were normal in this respect. Then similar tests were carried out on each subject using 100 gm. of each of the following sugars: lactose, dextrin, a commercial mixture of lactose and dextrin, the new commercial sugar B-Lac, consisting principally of Beta Lactose, and sucrose or cane sugar.

Following this, sucrose was selected as the most common and widely used sugar to compare with the new sugar B-Lac. Increasing quantities were taken in an effort to determine the amount that would produce a positive test for sugar in the urine and increase the carbohydrates in the feces.

METHODS USED

Blood sugar was determined by Folin's⁴ new ferricyanide micro method, using 0.1 c.c. of blood. Figures represent mgms. per 100 c.c. of blood. The principal objection to a much more frequent use of carbohydrate tolerance tests is the taking of the numerous blood samples, with its attendant pain and discomfort. By a very simple procedure we think we have removed this objection. By means of a good spring lance a fairly deep puncture is made in the thumb near the base of the thumb nail, nearly on a line with either side of the nail. The patient then grasps the thumb, with the thumb and forefinger of the other hand or a rubber band $\frac{1}{8}$ to $\frac{1}{4}$ inch wide is wrapped around the thumb creating a venous stasis. If then downward pressure is made with the punctured thumb, the blood usually wells up abundantly and is easily collected in the capillary pipette. In our experience the thumb is much more convenient and easily manipulated than the ear. If the excess blood is lightly wiped off, bleeding usually stops at once. When time for the next blood sample arrives, rub the puncture a few times with a cloth moistened in alcohol, produce the venous stasis and the blood wells forth again. This can often be kept up almost indefinitely. We have thus carried on an entire carbohydrate tolerance test, extending over four hours, from a single puncture. This procedure does away with the recurring pain of venous puncture of the arm and its effect upon the blood sugar. It is of particular value in

dealing with the neurotic individual. Urine sugar was determined by the method of Folin and Berglund⁵ for normal sugar in the urine. The results expressed in milligrams per hour.

Feces. Feces were thoroughly mixed and about a 10 gm. sample taken for dry matter. Then a 50 gm. sample was taken and 150 c.c. of water added, thoroughly shaken, centrifuged, and the supernatant liquid poured off. This solution was precipitated by tungstic acid, filtered, neutralized, and the sugar determined by the Folin and Wu method.

DISCUSSION

Tables I to VII inclusive show the effect on blood and urinary sugar of 100 gm. of the different carbohydrates studied.

TABLE I.

CLINICAL LABORATORIES
OF THE
BATTLE CREEK SANITARIUM
BATTLE CREEK, MICH.

GLUCOSE TOLERANCE TEST

Mr. E. H. C. (Glucose)

No.

Dr. W. B. Lewis

Date 7-2-29

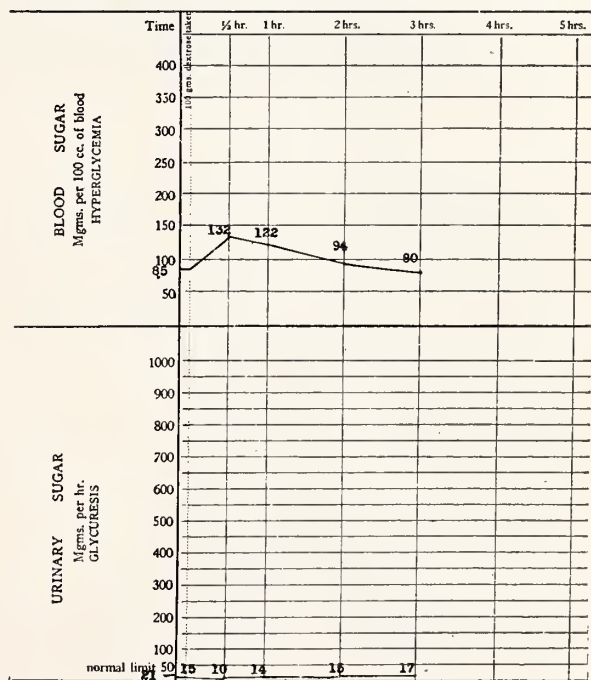


Table I shows typical normal glucose tolerance curves. Blood sugar reaches a maximum in one half hour, rapidly falls to the starting point and usually somewhat below it. Urinary sugar is practically a straight line; very little variation.

In contrast with Table I is Table II, that of a typical diabetic. This test shows the striking value of the tolerance test. The blood sugar before the test is only moderately increased, and the urine did not give a positive reaction for sugar. The patient

TABLE II.

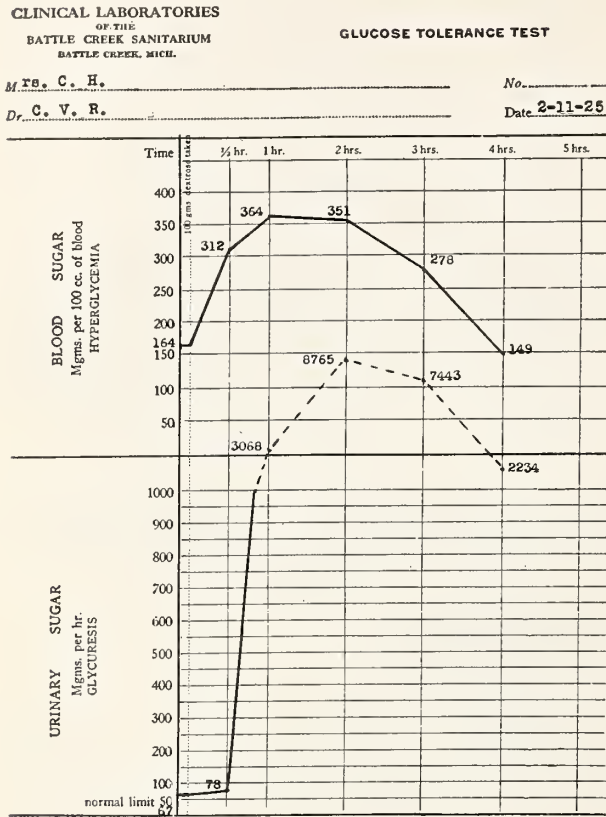


TABLE IV.

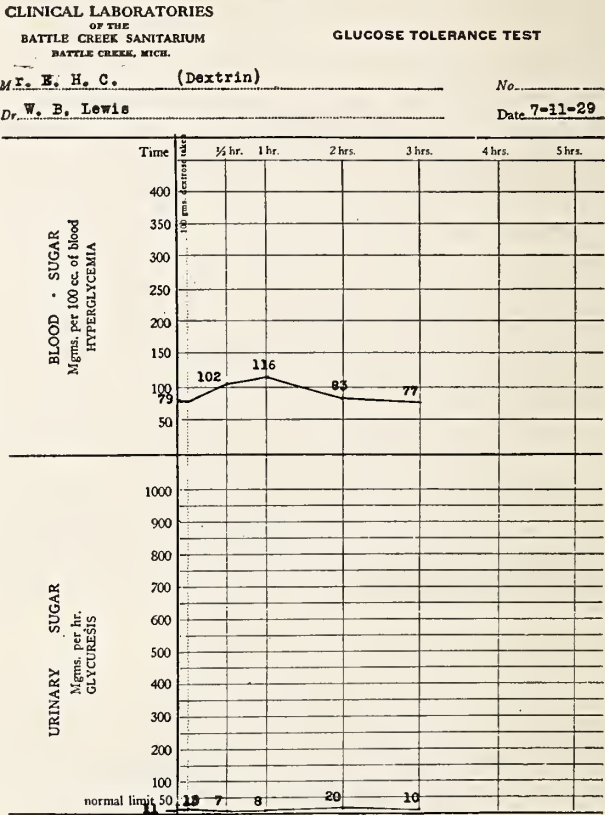
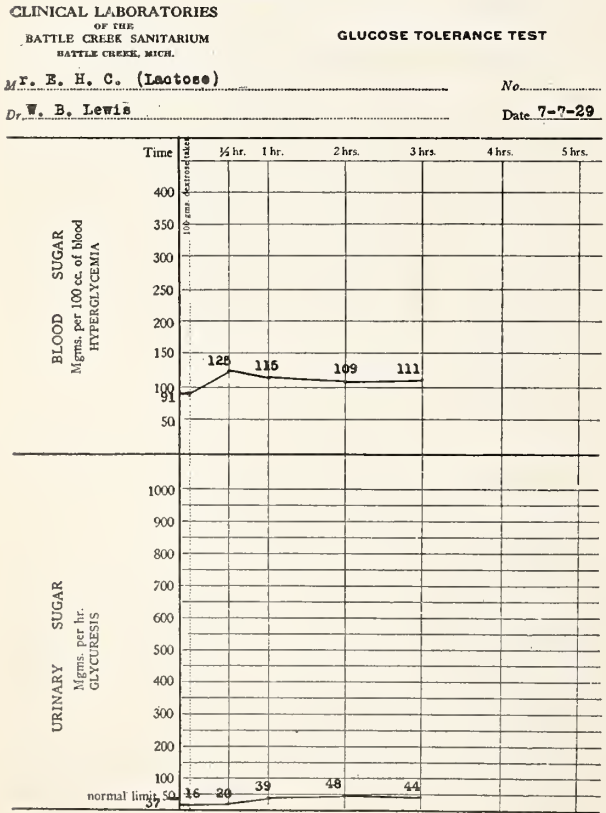


TABLE III.



our routine practice of running a glucose tolerance test on all patients having an entrance blood sugar of 130 mgm. per 100 c. c. of blood or higher.

Table III, Lactose: Blood sugar is practically normal, showing a tendency to remain slightly increased. Urinary sugar is slightly increased and gave a faintly positive test throughout the experiment.

Table IV, Dextrin: Blood sugar curve a little bit slower in reaching a maximum. Urinary sugar, little if any effect shown. Possibly a slight increase in the hour following the high point in the blood.

Table V, Lacto-Dextrin: Shows, as one would expect, practically a composite of those for lactose and dextrine, and, due probably to the presence of the dextrin in the mixture, we do not get even a faintly positive test for sugar in the urine, certainly no increase of either blood or urinary sugar that could be interpreted as harmful.

Table VI, Beta Lactose (B-Lac): Typical normal blood sugar curve as for glucose. Urinary sugar curve shows a slight increase for one hour and a half. Folin,⁶ in that masterly article on carbohydrates, page 251, says 10 gm. of lactose produces a temporary increase of sugar in the urine. We have

did not apply for treatment as a diabetic. The diagnosis was made clear because of

TABLE V.

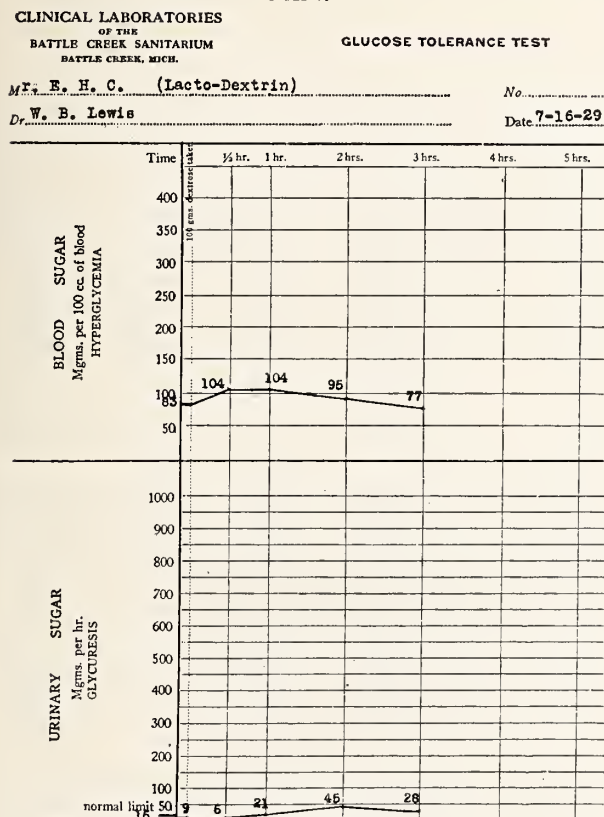
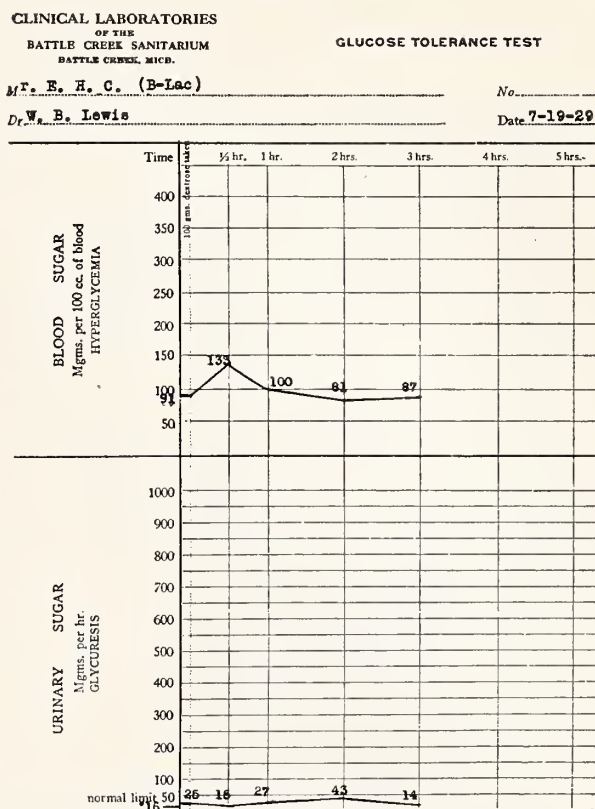


TABLE VI.



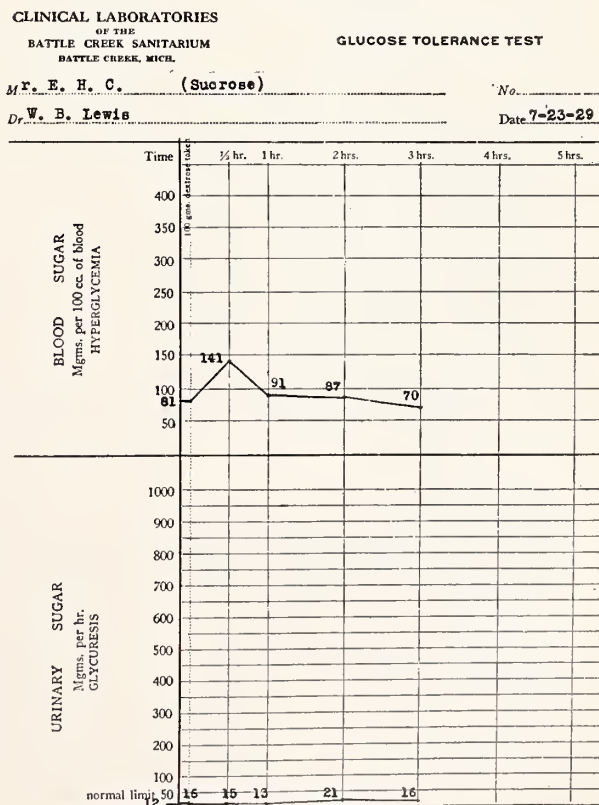
found only such small and temporary increase after 100 gms. of lactose or B-Lac. Therefore, the conclusion would seem warranted that there is no danger from the larger amounts.

Table VII, Sucrose: Shows typical normal blood and urinary curves, almost identical with glucose.

Table VIII: In this table is shown the comparative effect on blood and urinary sugar of increasing large amounts of cane sugar and B-Lac. They both have about the same effect for both 100 gms. and 200 gms. With 200 gms. of cane sugar, at the high point of the blood sugar, there is a rather large increase in the urinary sugar after hydrolysis, indicating that possibly some cane sugar was eliminated as such, or only slightly changed. Such an amount is probably quite frequently consumed, in the form of candy, by many people.

Table IX. A comparison of the amount of reducing sugar in the feces after 300 grams of sucrose and 150 grams and 200 grams of B-Lac. There is practically no increase after the sucrose, but a marked increase after the B-Lac. Up to .932% or nearly 1% of the dry matter. This is important as showing the greater value of lactose preparations in producing a medium in

TABLE VII.



the intestines favorable to the growth and development of the aciduric type of bacteria.

TABLE VIII
A STUDY OF REDUCING SUGAR IN THE URINE
AFTER INGESTION OF DIFFERENT AMOUNTS

Time R.P.B.	Sugar 100 gm.	Blood Sugar Before-After Hydrolysis		URINE					Total Sugar
				Vol- ume c.c.	Quali- tative Test	Grams % Sugar	Mgms. per Hr. Before-After Hydrolysis		
9:00	Sucrose	78	120	145	0	.020	22	72	29
9:30		115	169	78	0	.016	24	36	12
10:00		104	182	227	0	.016	72	54	36
11:00		74	115	600	0	.007	42	24	42
12:00		69	111	275	0	.005	14	22	14
W.B.L.	200 gm.								
9:05	Sucrose	78	133	94	0	.021	11	12	20
9:35		118	172	33	?	.026	18	24	9
10:00		135	192	92	++	.066	146	238	61
11:00		100	130	220	+	.045	99	119	99
12:00		96	133	152	0	.019	29	40	29
3:00				410	0	.014	14	18	57
P.R.C.									
8:50	100 gm. B-Lac	95		40	0	.051	20		
9:20		111		20	0	.069	14		7
9:50		95		16	0	.098	16		8
10:50		95		40	0	.062	25		25
11:50		89		65	0	.042	27		27
7:00	150 gm. B-Lac								
8:35				43	0	.033	9		14
9:35				110	0	.019	21		21
10:55				81	+	.078	47		63
12:00				43	green	.167	66		72
7:00	200 gm. B-Lac								
8:15				35	0	.073	20		26
9:15				205	0	.050	102		102
10:15				53	+	.108	57		57
11:20				32	+	.308	91		98
12:20				19	+	.442	84		84
1:45				54	trace	.151	58		82
3:15				43	green	.092	26		39

Table X. Showing the increase of reducing sugar in the feces after taking a large amount of B-Lac, in four doses of about 2 oz. each.

Previous to the above carbohydrate tolerance studies we have run glucose tolerance tests on about 100 students. None of the

normal healthy ones has shown alimentary glucosuria after the ingestion of 100 grams of glucose. This confirms Folin and Berglund's conclusion that in the normal healthy individual alimentary glucosuria cannot be produced. From another point of view, it means this: That when you find what

TABLE IX
A STUDY OF SUGAR RESIDUES IN FECES AFTER INGESTION OF DIFFERENT
AMOUNTS
(Subject: P.R.C.)

Date 1929	Stool No.	Time	Sugar	Tot. Sugar mgm.	% Sugar Dry Matter
8-12	1	9:00 A.M.	300 gm. Sucrose	14.4	.041
8-12	2	11:30 A.M.		10.0	.027
8-13	3	8:00 A.M.		13.3	.036
8-14	4	8:30 A.M.	200 gm. B-Lac	9.7	.029
8-14	5	3:15 P.M.		236.0	.932
8-15	6	12:00 M.	150 gm. B-Lac	31.1	.169

TABLE X
STUDY OF REDUCING SUGAR (B-LAC) IN FECES AFTER INGESTION OF
DIFFERENT AMOUNTS
(Subject: P.R.)

Date 1929	Stool No.	Time	Sugar	Tot. CH mgm.	% Sugar Dry Matter
7-29	1	2:00 P. M.	Before taking any sugar	6	.057
7-29	2	11:00 P. M.	1½ oz. B-Lac Toast and milk		
7-30	3	8:00 A. M.	45 gm. B-Lac Milk 8:00 A. M.	20	.090
7-30	4	1:30 P. M.	60 gm. B-Lac Dinner	86	.229
7-30	5	7:00 P. M.	60 gm. Supper		
			60 gm. 11:00 P. M.		
7-31	6	8:00 A. M.			

seems to be alimentary glucosuria in a patient he should be studied carefully as an early or potential diabetic, or for some other disturbance of carbohydrate tolerance.

SUMMARY

1. A comparative study is made of a new commercial sugar, Beta Lactose (B-Lac) with five different sugars when taken in the same amount (100 gm.) and under similar conditions.

2. Beta Lactose leaves a residue of sugar in the feces while cane sugar does not and therefore therapeutically Beta Lactose should be efficient in combating intestinal toxemia.

3. The data obtained in this series show that the use of such amounts of lactose preparations does not exceed the normal individual's carbohydrate tolerance.

4. A modified technique of obtaining 0.1 c.c. blood samples is emphasized, which does away with the fear and pain of venous puncture of the arm.

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CHRONIC MAXILLARY SINUSITIS*

A STUDY OF THREE HUNDRED AND THIRTY-TWO OPERATED CASES**

A. P. WILKINSON, M.D.
DETROIT, MICHIGAN

The maxillary sinus is more often diseased than its fellow sinuses, not only on account of the extremely unfavorable situation of the ostium, but, also, because of the intimate relation of its floor to the roots of the teeth. The predisposing factors in chronic maxillary sinusitis are, locally, nasal obstructions of any type; as, deviations of the septum, spurs, ridges and hypertrophic turbinates; and, generally, lowered individual resistance; as, fatigue, exposure to cold, poor food, worry and any of the various diseases producing toxemia. In my study of 332 cases of chronic maxillary sinusitis there were 88 with a deflected septum, 76 with nasal polypi and 16 with atrophic turbinates.

The etiological factors in chronic maxillary sinusitis as given by Skillern¹ are:
(1) Idiopathic (rare).
(2) Direct extension from the nasal mucosa (coryza).

*Read before the 109th Annual Meeting of the Michigan State Medical Society, Jackson, September 17-19, 1929.
**Case records from the Henry Ford Hospital.

(3) Infectious diseases (circulatory system).

(4) From alveolus.

(5) Through contamination of overlying sinuses.

(6) Foreign bodies.

(7) Traumatism (direct or indirect).

(8) Osteomyelitis, tuberculosis, syphilis and malignant tumors.

(9) Chronic or latent empyema.

In this series of 332 cases of chronic maxillary sinusitis, practically all were secondary to acute catarrhal processes in the nose and nasopharynx. Here in Michigan we have an over-moist, changeable climate and nearly everyone suffers from frequent attacks of coryza, predisposing them to sinusitis. In all cases of coryza there is bound to be more or less inflammation of the maxillary sinus. After repeated acute infections the mucosa about the ostium becomes thickened, narrowing the normal opening, impairing drainage and interfering with the normal protection of the cilia. With each attack of coryza the efficiency of the cilia to cleanse the antrum is impaired and, therefore, the sinus mucosa will show an especial predilection for renewed inflammation; in that way, the disease may become chronic. Sinusitis may follow any of the acute infectious diseases; however, with influenza there is an especial predisposition towards chronic sinusitis.

Nine cases in this series were secondary to apical abscesses. This is only 3 per cent and far below the percentage given by numerous authors—Skillern² 20 per cent, Turner³ 30 per cent, Luc⁴ 50 per cent, Hajek⁵ 8 per cent, Tucker⁶ 7 per cent.

Where there is more than one sinus infected in a chronic condition it is difficult to tell which one was infected first; however, the drainage is downward and pus from the anterior ethmoids and frontal sinuses may pass through the ostium into the antrum. There were twelve cases in this series where the antrum would not clear up after operation until after operative procedures on the upper sinuses.

Foreign bodies, traumatism, osteomyelitis and syphilis are, in actuality, rare causes of chronic sinusitis.

Symptoms: In chronic maxillary sinusitis the prominent symptom is a persistent unilateral or bilateral nasal or postnasal discharge, more noticeable in the morning. Pain and discomfort are occasionally pres-

ent, but are rare. When pain is complained of it is usually of the neuralgic type and in the supra-orbital region. In this study there were the following symptoms: catarrh, 279; head colds, 265; nasal obstruction, 142; headache, 46. It is interesting to note (Chart 1) that there were 102 cases, or 31 per cent, that came to the hospital without a complaint referable to the nose or throat.

Diagnosis: The diagnosis is based on the history, objective findings in the nose, transillumination, X-rays and, finally, antrum washings. There is usually pus in the nasopharynx and a general pharyngitis; a hypertrophic condition in the nose is usually present on the diseased side. However, if the disease is long standing there may be an atrophic condition present. One must not overlook the fact that many of the chronic cases have latent intervals when no pus is present in the nose and antrum washings are clear, although transillumination usually shows a shadow over the malar eminence and the roentgenogram will show thickened mucous membrane.

Treatment: Unless there is some urgent reason for immediate operation, correct any nasal deformity and treat the sinuses by means of a needle puncture and lavage at 2 or 3 day intervals for 2 or 3 weeks. If there is no improvement, conservative treatment is usually hopeless and operation should be advised.

Operation: What type of operation gives the best results? Some clinics report very good results from the antro-meatal operation and feel the radical operation necessary in a very small percentage of the cases. Other clinics favor the radical operation. Tucker⁷ reported 673 chronic cases in which the antro-meatal operation was done. Only five of these cases required a Caldwell Luc operation later, as far as the author knows. D. Campbell Smyth⁸ says, "The result seems too good to be true."

332 CASES CHRONIC MAXILLARY SINUSITIS

Average Age.....	38	Symptoms	
Male 196	Female 136	Catarrh	279
Complaints		Head Colds	265
No. ref. to N. & T. 102		Nasal Obstr.	142
Ref. to N. & T.		Headache	46
Colds	39	Diagnosis	
Nasal Obstr.	29	Transillumination	
Nasal Disch.	25	X-ray	178
Headache	22	Antrum Washing	
Sore Throat.....	19	Involvement	
Asthma	18	Right	103
Pain in Face.....	18	Left	117
Catarrh	16	Bilateral	112

Sinusitis	15	Nasal Deformity	
Cough	15	Deflected Septum..	88
Disch. Ear	8	Polypi	76
Dizziness	7	Atrophic Turb.	16

In this series there were fifty-one cases where the antro-meatal operation was done and two hundred seventy-one cases where the Caldwell-Luc operation was performed. The antro-meatal operation was done on cases where it was felt the mucous membrane lining of the antrum would clear up with free drainage and irrigation. It is interesting to compare the length of time it took the antrum to clear (that is, no pus on irrigation) after the antro-meatal and after the radical operation. The antro-meatal cases averaged 28 days to clear, while those having the radical operation cleared in 22 days where polypi were found, and in 16 days where the mucous membrane was markedly polypoid; the remaining cases cleared in 17 days.

In three of the antro-meatal cases a radical operation was necessary, in six cases a recurettement of the antrum was necessary after the radical operation; in twelve cases where the radical operation was performed it was necessary to do further operative procedure. In six cases an intra-nasal frontal and an ethmoid and sphenoid exenteration were done. In four cases ethmoid exenteration also was done, and in two cases that showed frontal involvement it was necessary to do an intra-nasal frontal and a radical frontal. The above twelve cases were followed for a time and the antrum washings still contained pus. I feel that a thorough search for other sinus involvement should be made in any operative case where pus is washed regularly from the antrum for more than three weeks.

The findings in the radical operation showed that 72 had polypi in the antrum and 49 marked polypoid mucous membrane, or 121 cases where the antro-meatal operation would have likely failed. Of the remaining 110 cases an antro-meatal operation would probably have been sufficient.

OPERATIONS			
Antromeatal	51		
	45—28	Days—Washing	
		Clear	
	3—Rad. Opr. Nec.		
	3	Data Incomplete	
Radical Anthrum.....	271		
Ant. Polyps.....	72—22	Days—Washing	
		Clear	
Polypoid M.M.....	49—16	Days—Washing	
		Clear	
Remaining	110—17	Days—Washing	
		Clear	
Improved	7		
Data Incomplete.....	33		

Secondary Opr.		Anesthetic	
Rad. Opr. Repeat.	6	Local	317
Eth. Sph. Fr.....	6	Ether	15
Ethmoid	4	Complications	
Frontal	1	Death	1
Frontal Rad.	1	Osteomyelitis	2

Anesthesia:* The operations were largely done under local anesthesia, which permits much better observation and more judicious curettement than general anesthesia. (317 under local anesthesia; 15 under ether anesthesia.)

Results: Of the 51 antro-meatal cases 45 were cured; that is, the washings were clear from the antrum; in 3 cases a radical operation was necessary; in 3 cases data were incomplete. Of the 271 cases where the radical operation was done there were 230 cures; 7 cases were improved, and in 33 data were incomplete.

Complications: There was one death caused by a pulmonary complication following ether anesthesia. Two cases developed osteomyelitis but cleared up after through-and-through drainage.

CONCLUSIONS

From the results it would seem that a very thorough study of each case is necessary before deciding the type of operation. By studying the history of the case, findings in the nose and nasopharynx, transillumination, X-rays, before and after lipiodol injection, and several antrum washings, we should form a mental picture of the mucous membrane lining of the antrum and then decide on the type of operation.

664 Fisher Bldg.

*Method of local anesthesia:
10 per cent cocaine with equal parts of adrenalin (1-1000) is applied directly to Meckel's ganglion and also around the anterior nasal nerve. This is done by atomizer and subsequent packing with the same anesthesia with cotton selvedge edge gauze. The maxillary sinus is washed with saline solution and the excess saline is removed with a Politzer bag, then one dram of 3 per cent cocaine and adrenalin (1-300) is placed in the maxillary sinus and this is gently expressed by means of Politzer bag. The nose in the inferior turbinate region is then packed with a 5 per cent cocaine solution, with an equal amount of adrenalin (1-1000). The patient is allowed to wait 5 to 10 minutes and then ¼ per cent novocaine is injected under the buccal membrane and distributed along the infra-orbital nerve.

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CHILDHOOD TUBERCULOSIS*

HENRY D. CHADWICK, M.D.

DETROIT, MICHIGAN

The diagnosis of the childhood type of pulmonary tuberculosis must be made from X-ray evidence. It can also be said with equal truth that cases of pulmonary tuberculosis of the adult type in children and adults can be diagnosed at a much earlier stage by X-ray than by physical examination.

The National Tuberculosis Association is planning a nation-wide publicity campaign to be carried on during the month of April, calling attention to tuberculosis as a disease not infrequently found in children.

There are two types of pulmonary tuberculosis—the childhood type and the adult type. The childhood type of tuberculosis is the name adopted by the American Sanatorium Association to describe the diffuse or nodular lesions and associated tracheobronchial lymph nodes that result from a first infection of the pulmonary tissue with tubercle bacilli.

The adult type of tuberculosis is the result of a reinfection from an exogenous or endogenous source. It generally begins in the apex, from which it has a tendency to spread. It is characteristic of this form that the tracheobronchial lymph nodes remain uninvolved.

The diagnosis of the childhood type depends upon the consideration of these factors: History, symptoms, physical signs, tuberculin test, X-ray evidence and exclusion of other causes that might produce similar conditions.

History.—Inquiry should be made as to whether the patient has been intimately associated with any person who has had pulmonary tuberculosis. The closer the contact, the more opportunity there is for infection. Prolonged exposure of a child to a patient with pulmonary tuberculosis usually results in infection, and excessive infection produces disease. Relationship to a person who has tuberculosis, without opportunity for contact, is not important in considering diagnosis.

SYMPTOMS

Many children have the childhood type of tuberculosis without manifesting any symptoms that can be ascribed to the disease, although they may have a progressive lesion.

*A booklet on childhood type of tuberculosis has been compiled by Dr. Henry D. Chadwick and Dr. F. Maurice McPhedran and published by the National Tuberculosis Association. This contains diagrams and reproductions of X-ray films showing different phases of childhood tuberculosis and a detailed description of the intracutaneous (Mantoux) and cutaneous (Pirquet) tuberculin test. This is to be distributed by the state and local tuberculosis associations from whom copies can be obtained.

Weight.—Either the childhood or adult type of tuberculosis may be found in overweight, average weight or underweight children. Therefore, many cases of tuberculosis will be missed if only underweight children are examined. Those in apparently excellent general condition may have an active focus of disease.

Undue Fatigue.—The tendency to tire easily is often noted and may be said to be the most common symptom in these children.

Cough.—Cough may occur during the stage of pulmonary infiltration. It is not, however, a constant symptom even in this phase of the disease; and, if present, is often attributed to a cold. It is not present after the perifocal inflammation has absorbed and the caseous or calcifying stage of the pulmonary nodule is reached, or when the disease is manifest only in the tracheobronchial nodes.

Fever.—It should be kept in mind that a child's temperature is more unstable and is about one degree higher than an adult's. Therefore, a child's mouth temperature may be within normal limits if it occasionally goes to one hundred degrees. If temperatures are taken of all the pupils in a classroom, several of them will be found to have temperatures of ninety-nine and five-tenths degrees to one hundred and no evidence of disease can be discovered. This is especially true if the room temperature ranges from seventy-five degrees to eighty degrees, as is often the case in school buildings. Active exercise in hot weather will often cause a rise in temperature of one or two degrees in a healthy child. A persistent temperature of one hundred degrees should lead to a careful search for the cause. It may be found that the child has tuberculosis, but most children with the childhood type of disease do not have abnormal temperatures.

Physical Signs.—A diagnosis of some phases of the childhood type of tuberculosis cannot be made by physical examination. Auscultation and percussion are of service only in finding diffuse infiltrations of the lung or such enormously enlarged nodes as are found chiefly in infants. Slight infiltrated areas, tuberculous nodules in the parenchyma and most lesions of the tracheobronchial glands cannot be demonstrated by physical examination. As a rule, only diffuse infiltrations or consolidations of the parenchyma give rise to physical signs.

Tuberculin Test.—A positive reaction to the tuberculin test always means infection with tubercle bacilli, but it does not necessarily indicate disease, or whether it is active or latent. The Mantoux, or intracutaneous test, is more accurate and with it a slightly larger number of reactors will be obtained than is possible with the Pirquet technic.

A positive tuberculin test always means the presence of tuberculous infection. Failure to get a positive reaction, however, does not always exclude tuberculosis. Sensitiveness to tuberculin may be absent in acute miliary or generalized tuberculosis and during some acute infectious diseases.

X-ray.—A roentgenogram is indispensable in the examination of a child's chest. Without it a positive diagnosis of the childhood type of tuberculosis cannot be made. Furthermore, a physician, however good a clinician he may be, is not justified in excluding tuberculosis without checking his physical examination of the chest with the evidence that only an X-ray film can give. There are two groups of lesions peculiar to the childhood type of tuberculosis that should be looked for in an X-ray film—the parenchymal and the tracheobronchial.

The parenchymal lesions may be found in any part of the lung. They may be nodular or diffuse. If diffuse the appearance is that of tuberculous pneumonia. As resorption takes place only one or more small nodules, or a few strands, remain. This evidence in time may also disappear.

The tracheobronchial node involvement may be seen as masses along the trachea, the main bronchi or their larger subdivisions. The density of the shadow cast by these diseased nodes depends chiefly upon the degree of calcification that has occurred. During the caseous stage, before any deposit of calcium has taken place, their density is so near that of the structures,

vessels and bronchi with their delicate areolar sheath that together fill the hilum space that the nodes cannot be differentiated. In relatively rare instances the nodes are so large that they protrude beyond the normal hilum area. Then the outline of the diseased nodes can be seen as they have a greater density than the lung tissue with which it is in contact.

Differential Diagnosis.—The diseases that sometimes simulate the childhood type of tuberculosis are bronchopneumonia, bronchiectasis, pulmonary abscess, Hodgkin's disease, enlarged thymus, neoplasms and mediastinal abscess.

TREATMENT

The essentials are rest, fresh air, suitable food and sunlight. When these factors cannot be obtained at home, institutional care is advisable. These children, except those with pulmonary infiltrations, need not be excluded from school as they have no open lesions, and therefore cannot infect other children with whom they may associate. Open air rooms, summer camps, preventoria serve an excellent purpose in giving these children living conditions that will aid them in healing their tuberculous lesions. The removal of physical defects that retard growth should be attended to without delay. It should be noted, however, that children with diffuse tuberculous pulmonary infiltrations should not be subjected to a general anesthetic or to tonsillectomy, as surgery in such cases often activates the disease.

Search for the Source of Disease.—It is important that all the other members of the family should be examined when a case of tuberculosis is discovered, so that any unrecognized spreader of tubercle bacilli can be found and kept from doing further mischief.

When an adult is found to have pulmonary tuberculosis, the children who have been in contact with the case should have a tuberculin test and the reactors X-rayed. When a child is found to have tuberculosis of any type, the adults should have a physical examination and an X-ray of the chest. It is not enough to depend upon physical examination to exclude tuberculosis. The history in many cases is unreliable, as previous illness is frequently forgotten or denied. A roentgenogram is needed to reveal fibroid cases that are often of long duration and sometimes have few or no

physical signs, and because unrecognized are a great menace to the community.

PROGNOSIS

This depends largely upon the child's reaction to the tuberculous infection and also to the frequency and dosage of bacilli. If further infection is stopped, most children will become adjusted to their disease unless extensive infiltration of the lung is present. Children sometimes succumb to an excessive infection, and death in these cases is due to miliary tuberculosis or a tuberculous pneumonia which becomes generalized. The majority, however, are able to withstand the infection, and the diseased nodules in the lungs and nodes become calcified and well walled off by fibrous tissue. Notwithstanding how well healed these lesions ap-

pear to be, they are a source of danger during the period of adolescence. Many girls and some boys break down at that time with pulmonary tuberculosis. From one-third to one-half of the cases of tuberculosis of the adult type found in adolescents have had a preceding childhood type of disease that is evident from the calcified lesions seen in the roentgenogram. Therefore, boys and girls below the age of twenty who are known to have the childhood type of tuberculosis should be advised to avoid strenuous exercise and competitive games unless their tuberculin reaction is negative and contact is known to have ceased in early childhood. Without this precaution there is great danger in these cases that excessive strain may reactivate dormant infection.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M.D., Commissioner
LANSING, MICHIGAN

STREAM POLLUTION PROBLEMS IN MICHIGAN

An interesting outline of the present status of stream pollution control measures in Michigan was presented to the Ninth Annual Public Health Conference in Lansing in January by Walter A. Sperry, Chem. E., Chief Engineer and Executive Secretary, Stream Control Commission of Michigan. We quote some of the paragraphs of special interest from Mr. Sperry's paper:

"At the threshold of 1930, Michigan stands 26th in age and 22nd in area among the states. It has become 18th in crops; 14th in farm values; 8th in live stock; 6th in population; 5th in wage earners; 4th in copper; 3rd in exports; 2d in iron; 1st in salt, chemical products, drugs, automobiles, engines, threshing machines and refrigerators, with the Soo the world's largest water gateway; and its furniture, food, celery, book paper and silk known all over the world.

"This wide range of mineral wealth coupled with its relation to navigable waterways, timber and fruit has in twenty-five years changed Michigan sharply from agricultural to industrial pursuits . . . while its inland lakes, long lake shore lines, summer climate, parks, highways, woods, trout streams and hunting grounds, all in easy reach of the industrial centers, have made for Michigan a 'peculiar heritage' to keep

us well balanced, normal, healthy and intensively productive.

"Michigan's population has increased 111.4 per cent since 1890, being approximately 4,500,000 in 1930. Of this population, 85 per cent resides in 47 per cent of the State's total area and below a line just north of Bay City. In this area the total population has increased 128 per cent in the last four decades. Also in this area, 80 per cent of the world's automotive products are made. Here is the 4th largest city in the United States and here industrial workers exceed by more than 60,000 the whole state population in 1900. Seven per cent of the population resides in the Upper Peninsula; six and one-half per cent in the Lower Peninsula above Bay City in which areas there are 22 people per square mile in comparison with 149 people per square mile in the lower half of the State.

"To meet the health and conservation problems created in this rapidly developing industrial area, it is necessary for Michigan to give prompt and efficient attention to stream pollution problems.

"In the Upper Peninsula, 40 communities have sewage collection systems and 10 have installed sewage disposal arrangements. Approximately 22 major industries discharge direct to the nearby streams. Of the total population, therefore, 38 per cent discharge their collected sewage direct to

the water courses and lakes. In the upper half of the Lower Peninsula, 36 communities have sewage collecting systems and 5 communities are equipped with sewage disposal works, while 40 major industries discharge directly to the streams. Here 27 per cent of the total population discharge direct to the water ways. In both these cases, few water supplies are directly affected for the present however, the problem being rather that of preserving the natural conditions of the streams, by conserving the fishing and recreational values. An interesting specific example of this is found at Traverse City located at the mouth of the Boardman River, where the bathing beach has been closed 'by order' due to the direct discharge of the city sewage therein.

"It is in the intensive industrial areas of the lower half of the Lower Peninsula that stream pollution problems are most acute. Here 36 communities have disposal plants representing 10 per cent of the population, and 2,847,000 persons representing 161 communities are connected directly to the lakes and waterways without means of disposal and with the capacity to discharge annually approximately 128,000 tons of sewage solids to the waterways. This is equivalent to a heavy freight train of 50 to 60 cars daily and must give every thinking person cause to consider Michigan's duty to Michigan. Due to the growth of cities in the last two decades and the present day tendency to enjoy the comforts of plumbing and sewage collecting systems, the amount of polluting matter reaching our waterways today is 3 or 4 times increased over 30 years ago. * * *

"Progress, however, has been and is being made. It is necessarily slow due to the sums of money required, which in turn require an intelligently aroused electorate who will authorize the necessary expenditure. * * *

"Michigan became definitely active through its departments of Health and Conservation in the latter part of 1925, preparing for conferences early in 1926 with the cities and industrial groups of the state, discussing the problem and initiating the work of submitting the reports and plans for sewage disposal works to the Bureau of Engineering of the State Department of Health for review. under Act 98 of the laws of 1913. On April 1, 1929, this bureau listed plants in operation in this state to the number of 38. * * *

"The experience of the Departments of Health and Conservation since these state-wide hearings in 1926 ripened into legislation in 1929 which makes provision for adequate administrative tools to deal with the state's communities both by way of giving the state sufficient breadth of authority to act effectively where necessary as well as providing for Michigan's communities means of financing sewage disposal works, other than the usual bonding methods. * * * This group of 1929 laws places Michigan abreast of the leader states in sanitary legislation, making it possible for Michigan to put into practice what experience of the past indicates as the most reasonable and effective forms of legislation with which to attack the problems as outlined. * * *

"Taken as a whole, there are 322 major industries distributed throughout the State. These include gravel, tanning, canning, sugar, paper, gas, milk and miscellaneous industries. Each of these industries offers a special pollution problem. This is particularly true of the milk industries whose effluent usually requires much more intensive treatment than is necessary for discharges from the canning factory, which again is differentiated from the paper mill, whose refuse is more bulky. Experience is teaching us that the State can best deal with these situations through the various group associations, individual offenders being reached through association officials more effectively than by direct methods.

"This is the picture of Michigan as we find it today. In conclusion, let us point out that but 10 per cent of the entire population of this state are equipped to discharge through sewage disposal arrangements; that 68 per cent of the entire population discharge direct to our lakes and waterways with the combined capacity to deposit therein 137,835 tons of sewage solids annually; and that whereas 38 of our Michigan communities have built disposal plants, 96 of the larger communities must build them. More attention must be paid to the industrial problem; systematic surveys of the state streams, watershed by watershed, must be undertaken to determine their flow, the amount of pollution, from whence it comes, whom it affects, and how. Public sentiment must be aroused and all state and civic bodies enlisted. Nor must we forget the value of working with our school children.

"This is surely a sufficient array of facts

to justify Michigan in this, its serious campaign to save and conserve our God-given resources."

NEW STUDY UNDERTAKEN

A new study was begun by the Bureau of Child Hygiene and Public Health Nursing in conjunction with the Michigan State Medical Society on Monday, March 3, to supplement the maternal mortality study just completed. Since 1,627 deaths of women from causes connected with childbirth were included in the latter study, the same number of cases will be taken up in the new survey. But they will be births which were survived by the mothers.

Facts will be assembled concerning the prenatal care of the mothers, their medical and puerperal history, the care received at delivery and during the lying-in period, and the results for both mothers and babies. These facts will be tabulated and compared with similar facts obtained in the maternal mortality study, and they should furnish valuable information concerning the factors which affect our maternal and infant mortality rates.

The letter from Doctor J. D. Brook introducing the new study to the physicians of Michigan follows:

To the Medical Profession of Michigan:

During the past two years the Michigan Department of Health in coöperation with the Michigan State Medical Society has been making a study of maternal mortality.

This job is now finished but it is proposed to conduct a similar study of an equal number of cases, for the purpose of comparison, under similar conditions, of mothers who have survived childbirth.

Dr. Florence Knowlton, who presents this letter, has been assigned to this work. Assuring you that there will be no publicity as to either parent or physician, we are asking that you give her any assistance you can to aid her in the compiling of these statistics for comparative study.

Very sincerely yours,

(Signed) J. D. BROOK, M.D.,
President, Michigan State Med. Society.
L. R. S.

DEPARTMENTAL COOPERATION FOR HEALTH IN INDUSTRIES

The best health records are found in those establishments where there is a close coöperative working relation between their safety, sanitary and medical departments, and also the community welfare agencies and local boards of health.

The attempt to correlate the efforts of several service departments of an industry that have to do with the safety and comfort of employees is a long step toward the much desired goal—the health and contentment of the workers. Such coöperation results in

less liability to accidents or illness, and less time lost from either cause; greater conservation and protection of the energies of the workers giving them a longer period of continuous efficient service. The ultimate result is greater quantity and better quality of product of their labor, which benefits alike the workers and employers.

Industries are awakening to the fact that medical service cannot be confined to the care of injuries of employees, but that each worker must, as far as possible, be kept in mental and physical condition to continue uninterruptedly to perform the type of work for which he has shown ability.

Medical directors in industries have learned that they cannot ignore the harmful influences of certain environments of workers outside as well as inside the plants. Through a plant health department much may be discovered that should be reported to community welfare agencies and the boards of health for correction and control.

Through the medical department, workers are being educated as to the purpose of sanitary and safety measures for their health benefit, also, as to effects of their environment and personal health habits, outside as well as in the plant, and shown their personal responsibility for correction of defects or habits that may be causing inefficiency, loss of time and irregular working periods. The good response justifies these efforts.

F. A. P.

THE SUMMER ROUND-UP

Many communities, and physicians, know from experience the aims and plan of conduct of the Summer Round-Up of the Children. It is an activity of the Congress of Parents and Teachers, begun in 1925 and now one of the most important projects of that organization. Its general purpose is to have an examination made, during the summer, of all children who are to enter school for the first time in the fall, and to have remediable defects corrected.

The Michigan Department of Health works closely with the Michigan Congress of Parents and Teachers in coördinating the activities of the local associations. Every effort is made to see that they are carried on in accordance with recognized public health procedure.

The summer program has already been launched in Michigan, by a letter from the State President of the Michigan Congress of Parents and Teachers to the Presidents

of all County Medical Societies. We quote the letter:

February 14, 1930.

My dear Doctor:

We wish to arouse your interest, and that of the members of your medical society in the Summer Round-Up of the Children, a project of the Congress of Parents and Teachers which has for its object the entrance into school each year of children free from remediable defects. To accomplish this object, some arrangements must be made for the examination of children who are to enter school in the fall, and the correction of existing defects.

A letter from Dr. F. C. Warnhuis, Secretary of the Michigan Medical Society, to Dr. Guy L. Kiefer, State Health Commissioner, states that the Executive Committee of the Medical Society endorses the coöperation of the State Health Department in the Summer Round-Up. This project, therefore, has the approval of your own State Medical Society, and we hope that the members of your County Medical Society may go on record as being willing to coöperate in this project to make the children of their community physically fit to enter school.

Some one from your community may call on you in the near future with reference to the Summer Round-Up and we hope that you may offer your coöperation and that of your group in this very worthy movement.

Sincerely yours,
(Signed) (Mrs. J. K.) FRANCES S.
PETENGILL, President,
Michigan Congress of
Parents and Teachers.

THE NEW PLUMBING CODE

The state plumbing law passed by the last legislature, Act 266, P. A. 1929, lays down three requirements to be met by the State Commissioner of Health. The necessary organization must be set up so that all plumbers shall be licensed; inspection and supervision of plumbing must be provided; and minimum standards for plumbing practice must be adopted and enforced.

The necessity for minimum standards for plumbing practice is not generally appreciated. Plumbing has played no small part in the advance of civilization. It came into being through the struggle of mankind to store, treat and distribute safe running water for household and industrial purposes. It has provided many comforts, fostered cleanliness, and eliminated much drudgery. It furnishes the opportunity for liberal use of water, and for the rapid removal of human wastes. When it is installed in accordance with scientific principles and natural laws its value to public health is obvious.

Failure to observe these principles and laws in the installation of plumbing, however, brings about conditions which can be remedied only through the adoption of cer-

tain minimum requirements. Hence the necessity for a state plumbing code.

It was in 1921 that the Federal Government recognized the importance of standardizing plumbing, and through Secretary of Commerce Hoover a committee was appointed to draw up a standard plumbing code. This is frequently spoken of as the Hoover Code, and it has been accepted as the basis for state plumbing codes throughout the United States.

The new Michigan plumbing code sets forth, first, basic plumbing principles and defines the terms used in plumbing. It states the general regulations for the installation of plumbing and specifies the minimum quality, weights and materials. It states how joints and connections between various kinds of material shall be made, and where traps and cleanouts are required and where prohibited. It deals with water supply and distribution, cross connections, and the minimum sizes of supply pipes which shall be used for fixtures to insure sufficient and proper amount of water being supplied to them. It specifies the number of plumbing fixtures which shall be installed in various types of buildings and the type of fixtures which may be used; the kind and size of soil, waste, and vent pipes that may be installed and how they should be installed; of what material and how the building drain and sewers and storm water drains shall be constructed; and how special wastes shall be taken care of. There are also specifications for the inspection and tests of plumbing, and specifications for the construction of catch basins and sewage treatment works.

A portion of the code is devoted to its administration, the duties of owners, the competency of plumbers, including the rules governing the examination of plumbers, and the penalties for violations.

The entire code is designed to assure better plumbing for the public, and thereby to provide better health conditions. It is not a plumbers' code for the benefit of the plumbing trade, but a code for the public, to which the plumber must adhere. It insures the installation of plumbing in accordance with scientific principles and natural laws, with consequent better living conditions.

Two public hearings on the plumbing code have been held in Lansing, with the building trades fully—and vociferously—represented. The Committee is now working on the revision.

J. M. H.

MAY DAY—CHILD HEALTH DAY

Plans for the celebration of May Day as Child Health Day are already taking shape in Michigan, as in most other states. The idea, which originated with the American Child Health Association several years ago, has a strong popular appeal.

A State May Day Committee made up of representatives of all the agencies in Michigan interested in the welfare of children has general supervision of activities in Michigan. Suggested community programs are sent out, posters, plays, and pageants are furnished, and all affiliated organizations are urged to take some active part in the celebration. Emphasis shifts from year to year from one aspect of health to another, but it always centers around children. This year special stress is to be laid upon the utilization of all existing local health resources for the promotion of the health of children.

FINAL COMMUNICABLE DISEASE REPORT
FOR 1929

Final reports on the incidence of communicable diseases throughout Michigan in 1929 have been received in the Bureau of Records and Statistics. Since they differ somewhat from the tentative report already published in these columns, the revised tabulation is given:

	Cases Reported		
	1929	1928	5 Year Average
Pneumonia	7,458	7,562	5,937
Tuberculosis	6,248	5,885	5,654
Typhoid Fever	310	390	668
Diphtheria	4,618	3,724	4,743
Whooping Cough	9,340	9,700	7,632
Scarlet Fever	14,245	10,486	11,855
Measles	18,041	27,039	20,922
Smallpox	2,410	1,335	1,726
Meningitis	1,864	276	156
Poliomyelitis	180	77	242
Syphilis	16,606	15,323	14,739
Gonorrhea	9,661	8,592	9,953
Chancroid	333	100	119
Total	91,314	90,489	84,346

TRUTH ABOUT MEDICINE

NEW AND NON-OFFICIAL REMEDIES

Mead's Viosterol in Oil 100 D.—A brand of viosterol in oil 100 D, N.N.R. (Jour. A.M.A., August 31, 1929, p. 693). Mead Johnson & Co., Evansville, Indiana.

NEW TREATMENTS FOR CANCER

In a letter Walter B. Coffey and John D. Humber outline their work in connection with an experimental method of treating cancer which involves the injection of extracts of the suprarenal

cortex. The work is in the earliest of experimental stages and hardly sufficient on which to base definite claims. The claims of Drs. Coffey and Humber have, like those of most investigators, been exaggerated in current reports. The publicity, given through Hearst newspapers primarily, to the Coffey-Humber cancer treatment has brought about the very type of injury to scientific research that was predicted. Regardless of the fact that Drs. Coffey and Humber have made it clear that their work is purely experimental and that they do not claim to have developed a cancer cure, the great trek of cancer sufferers across the continent has begun and physicians everywhere are besought by their patients to procure this remedy. (Jour. A. M. A., February 22, 1930, p. 562.)

COUNCIL OF PHARMACY 25 YEARS OLD

The Twenty-Fifth Anniversary of the Council on Pharmacy and Chemistry.—At a meeting held February 3, 1905, the Board of Trustees of the American Medical Association created an advisory board to be known as the Council on Pharmacy and Chemistry. The organization of this Council was perfected on February 11, 1905. Thus the Council on Pharmacy and Chemistry passes the twenty-fifth year of its organization and continues, in a second quarter century, one of the most notable works for scientific medicine ever accomplished by any organized group. It is significant that several of the original members of the body have maintained their connection since its inception and that the secretary, W. A. Puckner, has rendered continuous service as a full-time officer for the body from the first. The Council could not have achieved what it has, without the support of the medical profession of our country. Thus, with the establishment of the Council, the advertising of medicinal preparations in the Journal of the American Medical Association was limited to those products that had been passed by the Council. The same rule has applied to the other publications of the Association, and finally every state medical journal, except those of Illinois and New York, followed this lead. A considerable number of journals not controlled by medical societies also give their support to the Council's work. The medical profession must support the Council or its work will be futile. The members of the Council serve without remuneration and the Journal of the American Medical Association tenders to them the thanks and appreciation of the profession that they have so well served. (Jour. A. M. A., February 8, 1930, p. 413.)

THE COMMITTEE ON FOODS

More than a hundred products, representing the products of numerous manufacturers, have been submitted to the committee, in addition to several national advertising campaigns by coöperative marketing organizations. This coöperation is welcomed by the committee but obviously has thrown a great burden of work on the committee at the start. Manufacturers have greeted with acclaim the permission to use on packages and in advertising the seal of the committee. Whereas less food is eaten, so far as concerns caloric or energy value, foods have been greatly modified to improve palatability and to provide what are recognized as necessary ingredients in the form of vitamins and mineral salts. It is the hope of the committee that its efforts will give stability to a rapidly growing industry and prevent the sinking of the modern food market in a morass of hokum such as engulfed the drug industry in its developing stages. (Jour. A. M. A., February 8, 1930, p. 415.)

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APRIL, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

WHERE WE STAND IN THE EYES OF THE LAW

The question of physicians' rights, duties and responsibilities appears to be one that has never been definitely settled. The determination of these things is the field of medical jurisprudence which has come to be a very important borderline field between medicine and law.

Is a physician operating in a charitable hospital exempt from liability on account of the charitable nature of the institution? Answer, he is not exempt. This editorial is based upon a communication on the subject from Mr. Herbert Barbour to the Chairman of the Medico-Legal Committee of the Michigan State Medical Society. Mr. Barbour cites a case against a doctor who performed an operation at a prominent Michigan hospital. "The reasons given for ex-

emption of a charitable institution from damages for its torts does not in any way apply to the physician who is operating in the institution."

Is a doctor liable if he were employed by a charitable hospital on a stated salary? A case is cited in which the Supreme Court of Michigan held the physician liable even though operating in a charitable institution.

In this same communication Mr. Barbour states that there have been a number of rulings in which corporations employing physicians or surgeons to attend injured employees are not liable for damages provided the companies use their best judgment in the employment of doctors. According to this it appears that the industrial surgeon who works on salary is not exempt from personal responsibility in cases of alleged malpractice.

The question has arisen as to the ownership of X-ray films. Mr. Barbour goes on to state that he has not been able to find a decision directly on this point but quotes a Massachusetts case which uses the following language:

"There was undisputed evidence that the X-rays taken in the hospital laboratory as these rays were, are considered hospital property; hence they are not taken except on the order of the physician or surgeon, that the X-ray pictures themselves are indexed and numbered as part of the hospital record, that from the pictures the radiologist makes findings in writing, which are a part of the X-ray laboratory records and held there as part of the record of the hospital."

Mr. Barbour gives his own opinion to the effect that the patient does not pay for the plates but for the physician's opinion as to the condition from which he is suffering. On the other hand he feels that the patient is entitled to the physician's diagnosis of his condition if the physician was employed for that specific purpose. To sum up, then, it is evident that the physician should surround himself with every legitimate protection whether he is employed on salary in a hospital or by an industrial plant or insurance company, or whether he is engaged in the private independent practice of his profession. There is no better protection than membership in his County and State Medical Society as well as in one of the insurance societies that will insure financial protection in the case of an adverse decision by the courts.

In regard to the ownership of X-ray plates, Mr. Barbour's opinion, as well as that of the court decision mentioned, ap-

pears very logical and reasonable. An X-ray plate is the basis for an interpretation and the interpretation calls for more or less practice and skill. It seems reasonable, therefore, that the X-ray film being a part of the radiologist's records, namely the basis for his interpretation, is his personal property, subject, however, to demand by the courts who may find occasion to subpoena the doctor to interpret the same.

MEDICAL FACILITIES IN THE UNITED STATES

The Committee on the Cost of Medical Care is beginning to report progress on its investigations. A brochure under the above title has been published recently. The term "medical facilities" is defined to include the private practice of physicians, dentists, nurses and other individuals and the work of all types of medical and public health agencies. The Committee states that there are approximately 1,500,000 persons in the United States employed in the care and prevention of illness. The personnel is not without interest. There are 143,000 physicians; 67,334 dentists; 200,000 trained nurses; practical nurses 151,996; druggists 100,000; hospital personnel including superintendents 552,600; Health Department personnel 11,500; the number includes also technicians and assistants of various kinds. Among the irregulars and cultists are enumerated osteopaths 7,602; chiropractors 1,500; naturopaths 500; christian science practitioners 8,500.

The report notes that, the country over, physicians have not been increasing as rapidly as population, while both dentists and registered nurses have increased at much greater rate. The growth of clinics has been spectacular. The report defines "clinic" as an institution receiving ambulatory patients for diagnosis, therapeutic or preventive medical service. The report states that though the increase in the number of doctors does not keep pace with the increasing population, we have a greater number of physicians per 100,000 population than any other country in the world. The inadequate distribution is to be regretted. In 1927 South Carolina and Montana had only 71 physicians per 100,000 people while California had 200. There is a great tendency for the recent medical graduate to shun the small place.

Nearly 20,000 physicians limit their prac-

tice to a specialty while as many others practice a specialty but do not limit themselves to it entirely. It is estimated that at least eleven per cent of all doctors are employed on a full-time salary.

In 1910 the number of clinics was 600; by 1926 the number had increased to 6,000. These clinics are maintained by hospitals, governmental and private health organizations, industrial and commercial establishments and charitable agencies. Among recent developments are mentioned the so-called "pay clinics" and "group clinics."

The brochure from which we obtain these data is an abstract of a ninety page report which is doubtless interesting reading. The tendency is away from private independent practice of medicine to practice by the group or under group control whether it be clinic or industrial or commercial institution.

"SURGICAL BABBITS"

Under this heading the American Journal of Surgery vents its feelings on those so-called surgeons who descend upon the European Clinics en masse and from their actions get American surgery in wrong with the medical and surgical profession of of European countries. The groups consist, not of representative American surgeons, but of "very mediocre practitioners," not even outstanding in their own counties. Continues the American Journal of Surgery, "They have done no studying since graduation from medical school, they read almost nothing, neither do they do any research, add to the literature, visit home clinics or take postgraduate courses. They enjoy large practices or have made a fortune in real estate or the market. * * * Enterprising members of the profession of the go-getter type organize clubs, groups, societies much on the style offered by any well known travel agency to visit foreign countries and see 'all the clinics.' Thirty to a hundred medical Babbitts who have no idea what it is all about and care less, 'sign up' and in a gay mood depart for distant shores. * * * Herd-like they would descend on a place and overrun it, strain their necks to see all. and were mainly interested in taking moving pictures of everything; the operators, the nurses, in the 'queer' looking uniforms, etc."

The well qualified surgeon, like the true traveler, does not attract attention. Much has been written about the vociferous tour-

ist, and one or two in a shipload can do more to give this country an unenviable reputation in the minds of the European than a whole ocean liner full of orderly quiet citizens of the United States can do to redeem that reputation. Those who would visit foreign clinics with a seriousness of purpose would do well to consider carefully such groups as the Editor of the American Journal of Surgery describes. The independent traveler whether a physician looking in on foreign clinics or merely a traveler in a nonprofessional capacity will get a great deal more satisfaction than by being one of a crowd.

THE PSYCHOLOGY OF THE DELINQUENT CHILD.*

Professor Adler's method is essentially one of medical case study; therefore he believes that each problem should have medical control. The home and the school furnish preferred influences. In the program of disciplines the teacher is invaluable. It is exceedingly important to arrange for appropriate relations between the child and society at large.

When the environment of home and school and the ordinary contacts with society are inadequate to cope with the more difficult problems like those presented in the child whose tendencies are indicative of future criminality, small institutions accommodating groups not larger than twenty, and directed by experts, are advised. These places should be called recuperation homes; here the delinquent child could be taken for intensive training for a period of two or three months.

The simplicity, reasonableness and practical application of Professor Adler's methods are certainly to be commended. The keynote in the development of his anticipated results when expressed by one word is *cooperation*. The system is both unitary and communal. Effort is first directed to the child, the central unit, and all training must follow the path of securing the appreciation of the child that he is not the center of attention and a receiver only. He should be taught to give as well as to take, and that giving of himself to others is normal and helpful, while always taking in a selfish way from others is abnormal. The

*Dr. Alfred Adler of Vienna, Austria, delivered a series of five lectures before the Medical profession of Detroit during the latter part of January. The series was made possible by the Senator Couzens fund.

child who always insists upon being the center of attention and attains his desires, is a pampered child. The only child of the family is likely to be of this type. The first born, or the last born, may frequently have similar tendencies.

The parent, the teacher and the physician are each advised to use the child's earliest recollections as a means to reveal tendencies and styles of life.

Inquiries are advised as to what the child wants to be; whether he would prefer to be a boy or girl; whether he would prefer to be a person, dog or fairy; as to what makes him afraid; and what personal habits he has used as means for compelling attention.

In some children "bet-wetting" is a familiar example of this type of habit. When the child has a compelling desire for attention, he should be taught that his good qualities rather than the bad are all that will secure attention.

The delinquent boy or girl easily learns the technic of getting parental control through specializing upon certain influencing habits. The less intelligent the parent, particularly the grandmother and mother, the easier the conquest. If the child's habit worries the parent, it is a sure sign the child is in control.

JAMES E. DAVIS, M.D.

EDUCATION BY DISCUSSION

The New England Journal of Medicine, in a recent number, commented upon a statement by Muirhead to the effect that in the United States discussion as a method of promoting knowledge did not exist. By discussion is understood a calm, dispassionate exchange of ideas with the object of arriving at truth, or as near truth as possible. Concerning most questions the American, according to this writer, either knows it all, or is not at all interested. In either case discussion is out of the question. It is not that we do not talk. Take for instance the perennial subject prohibition—enough is said, but there is practically no modification of our attitude regarding it, whichever side we happen to favor.

The editorial in the New England Journal of Medicine relates that a proposed meeting of physicians to discuss birth control had to be given up because it was thought that such discussion would divide the profession and wreck a certain county

Medical Society. Medical education is another topic that evidently is not amenable to discussion in the East.

Probably the lack of disposition to indulge in calm deliberation is a national characteristic. It may be due to climate or what not. More than one European observer has commented upon the spirit of intolerance that is apt to be accorded any vital subject in this country. A subject that is purely academic is apt to be met with lack of interest or indifference.

And yet we look forward to conferences, Leagues of Nations, world courts as a means of preventing future conflicts. It would seem that the remedy would be in a greater use of debate, especially in the discussion of such subjects as admit of difference of opinion. This would include so far as medical societies are concerned all topics of a medico-social nature. Debate properly conducted demands a sort of intellectual sportsmanship that should prevent cleavage in any group of intelligent people.

TUBERCULOSIS

Tuberculosis remains a major problem in Michigan, not having diminished in intensity to the same degree as it has in some of the Eastern States. We are faced primarily with the lack of institutional accommodation. It is generally accepted that sanatorium care is necessary in a large proportion of tuberculous patients to carry out the thorough details of proper treatment. The patients are thus educated not only as to how to continue treatment at home but, what is equally important, how to prevent infecting others in the household. This year's slogan for the National Tuberculosis Society's educational program is "Protect the Children from Tuberculosis"—a very worthy one to say the least. Though we are now vaccinating a very limited number of young children against tuberculosis, vaccination is in the experimental stage, and it will be some time before this procedure can be used as regular routine. Thus we are still confronted with our age-old problem in Michigan—removal of the source of contact in a large number of active tuberculous patients to prevent the children from being infected and, what is perhaps even more important, from receiving overwhelming doses of infection. This can only be procured by a sufficient number of beds being available

for hospitalization of the adults as the source of contact. We also lack sufficient sanatorium beds for children. The Dubois Health Center (Detroit) demonstration showed conclusively that contacts (both children and adults) kept under careful continued observation—hygienic, social, economic—will not break down with the disease.

Tuberculin skin testing and radiographs of the chest are indispensable in making the diagnosis of tuberculosis in children. These tests should be carried out wherever there is contact with open tuberculosis and in all cases of suggestive symptoms, irrespective of the presence or absence of physical signs in the lungs. The X-ray has the added value of showing the actual progress of the disease and should be repeated as indicated.

—D. S. BRACHMAN, M.D., D.P.H.

THE EDITOR'S TROUBLES

Probably nearly everyone who reads medical Journals has been a contributor at some time or other, or contemplates being one. There are a few matters in regard to the preparation of copy for the printer which if borne in mind would greatly assist in getting medical or scientific papers to the readers in a condition gratifying both to the writer and reader, and we might also say to the editor as well. We do not refer to the matter of grammar, punctuation or spelling but assume that the prospective writer is efficient in these things.

Most Journals (and we are speaking for ourselves) prefer that all copy be typewritten, double space, one side of the paper, with good margin on the left hand side. The ordinary business letter-head paper 8½x11 inches is a very convenient size and, since most writers use this, it is apt to be uniform. Occasionally papers are received without the author's name; this entails, of course, loss of time in search for the writer. The author's name, University degrees as well as his address, should be a part of every contribution. The different pages should be fastened together so that there is no possibility of becoming detached and therefore lost. The ordinary clip that is slipped over the corner is not satisfactory. Again, the copy sent to the editor is often a second or third carbon, more or less smudged at that. The author should send the original and keep the carbon in case the

original be lost or mislaid. The original paper if accepted is not returned to the author. He has the opportunity, however, to make corrections with alterations within reason on the galley proof. His original copy, however, belongs to the editor if accepted, in much the same way as the original prescription is the property of the druggist.

Lastly, a word in regard to illustrative material. Illustrations usually consist of two kinds, either half-tones or line drawings. These are expensive to produce, the price being the same no matter where made in the United States. They should therefore do duty as *real* illustrations. A cut that is more or less indifferent serves no useful purpose. Even fairly good X-ray films when printed and reproduced as photo engravings show less detail than the original. The original X-ray negative contains the greatest amount of detail, a print from it shows less and an electrotpe less still, hence the advisability of using X-ray films in which the detail is beyond question. Editors frequently receive illustrative material without any mark showing to whom it belongs. All such material should be marked as distinctly as the author's original paper with the name of the paper (on the back), the name of the author and the number and sequence of the illustrations, if there are several, and the legends all distinctly typewritten.

These are a few of the items which would-be medical authors will do well to bear in mind.

SCINTILLATIONS

An economist is a man who tells you what to do with your money—after you have done something else with it.

Backbone won't get you anywhere—if the knob at the top of it is made of the same material.

Experience—that's what you get when you are looking for something else.

Hard times—a season during which it is very difficult to borrow money to buy things you do not need.

An income—something you can't live without or within.

It is easy to meet expenses these days—they can be met everywhere.

A man and a motor are alike in one way—too much knocking indicates that something is wrong.

There is one law which is fully enforced—the law of gravity.

The fellow who puts his wedding off until times get normal is apt to get normal himself.

Why do they call it a shipment when it goes in a car, and a cargo when it goes in a ship?

An optimist—someone who can always see the bright side of the other fellow's misfortune.

—Goodmethod Talks.

THE BREED OF MEN

You talk of your breed of cattle
And plan for a higher strain,
You double the food of the pasture,
You heap up the measure of grain;
You draw on the wits of the nation
To better the barn and the pen,
But what are you doing, my brother,
To better the breed of men?

You talk of your roan-colored filly,
Your heifer so shapely and sleek,
No place shall be filled in your stanchions
By stock that's unworthy and weak.
But what of the stock of your household,
Have they wandered beyond your ken
Or what is revealed in the round-up
That brands the daughters of men?

And what of your boy? Have you measured
His need for a growing year?
Does your mark of his sire on his features
Mean less than your brand on a steer?
Thoroughbred—that is your watchword
For stable and pasture and pen,
But what is the word for the homestead?
Answer, you breeder of men!

—Anonymous.

THE DOCTOR'S BUSINESS

(New York Sun)

"Public health has taught us that one man's health is everybody's business," writes Dr. Ray Lyman Wilbur, officiating not as Secretary of the Interior but discussing medical progress in an economic world in *Medical Alliance Review*. Dr. Wilbur charges that his profession neglects the business of medical practice and urgently needs the assistance of economic advisers.

An organized world of business, by its dominating influence, has wrought in medicine changes which that profession, preoccupied with purely scientific progress, has failed to observe. "Medicine stumbles ahead as a great social factor led by a few far-seeing individuals, prodded by a lot of uplifters, legislators and enthusiasts," Dr. Wilbur declares. He proposes a study program on the cost of medical care with the aim of formulating standards of business practice, and would seek the guidance of social workers and economists. He holds that "some plan must be devised so that official snoopers will not be projected between doctor and patient," and warns that

"The golden thread of human understanding and of close personal relations between doctor and patient may be left out of the new social fabric which is being woven right under our eyes."

But one of the chief criticisms leveled at doctors by this member of the profession is on the score of their uneconomic system of fees. He asks curtly: "What other business has a sliding scale of charges varying from \$25 to \$10,000 for the same service?" and reminds his colleagues that free work and uncollected bills form a large item in the accounts of the average physician.

Like artists and some kinds of musicians, doctors do not devote sufficient care to their practice as a business, it would appear from these charges. They are too satisfied to depend on a secretary or other assistant for financial advice. They err on the side of altruism. Dr. Wilbur's argument that medicine has proved itself too valuable for society to allow it to be inefficient and inadequate in service may sound like a strong rebuke, but it is unanswerable.

THE EDITOR'S EASY CHAIR

THE LIVING PAST

"To become historical-minded is to attain intellectual majority."—J. H. Robinson.

"Only the past can furnish the key for an understanding of things of the present."—Sudhoff.

"He who cannot render an account to himself of at least three thousand years of time will always grope in the darkness of inexperience and merely live from day to day."—Goethe.

And so we might continue indefinitely. Whatever may be said of the literary output of the past twenty-five years, a great deal of it has been historic and biographic. In this age of progress or rapid change as you will, we are disposed to look to the past more than at any other similar period in recorded history. Mankind is groping for guidance. Within the past decade the medical profession has turned its attention to medical history and it is being made a subject of undergraduate instruction in many medical colleges. In some cities the medical profession have their medical history clubs. Several Medical Journals of national scope have made it a regular feature. May we look upon this as evidence that the profession is attaining its intellectual majority.

If we only stop to think of it we are the willing adherents of the past. To quote a great historian: "The imagination of the most radically minded cannot transcend any great part of the ideas and customs transmitted to him." According to Marvin, who coined the felicitous expression, "The Living Past," the pious Japanese believe that the spirit of an ancestor is more powerful than that of his living representative on earth. To realize and acknowledge the link that binds one to him is a primary duty; to carry on and extend his fame would be one's greatest glory. Thinking backward has accompanied and inspired a new and passionate effort for living forward.

SCIENCE TO THE FRONT

Time was when the name of Harvey was omitted from history and that of Newton was mentioned only as master of the mint and Roger Bacon only as a Franciscan friar. Wars were given undue prominence and disease and the struggle for existence practically none at all. The time has come when science has demonstrated its effectiveness in the preservation of the race through increased production of foods, through sanitation and preventive medicine. The modern historian has come to recognize the superiority of peaceful revolution or evolution as contrasted with bloodshed. Hence that branch of world history which has come to be known especially as the account of man's effort toward race conservation assumes a new importance.

The study of medical history may be undertaken for both pleasure and profit; for profit, inasmuch as it enables us to see the present in its proper perspective. It becomes, like the study of general history, the solvent of prejudices, which gives our thinking a necessary freedom. For pleasure, inasmuch as the story of medicine is replete with human interest. It is the story of the development of the race, including its beliefs and superstitions. Not only have we the great epochs of medical history but likewise the biographies of great men, as great as in any other department of human knowledge. The

reader of history in general as well as of medical history is a traveller in time, a tourist so to speak to the past, as the modern traveller is an interested visitor to foreign lands.

MICHIGAN MEDICINE

How shall we begin? Logically, at home. Let us read the history of medicine as revealed within our own State. The first volume of The Medical History of Michigan will appear shortly, after over three years spent on its writing and compilation. This history among other things contains chapters on Public Health, Hospitals, Training Schools for Nurses, Medical Defence, Medical Education, Medical Journalism, State Hospitals, The American Indian, His Medicine, Physicians with the Early Explorers and Adventurers, Eighteenth Century Physicians, Therapy Then and Now, Women Physicians, and Medical Societies. Dr. C. B. Burr, the editor and historian, has aimed to make this History anecdotal as well as serious and to reveal the accomplishments and influence of the medical profession in the early development of the State. The intimate contact of Dr. Burr with many prominent physicians of the nineteenth century has enabled him to rescue from oblivion incidents which might otherwise have been buried with those most intimately concerned. These two volumes when complete embody the plain, the piquant, the controversial in the social aspects of medicine, rendering the history at the same time readable and entertaining. The fathers of medicine in Michigan from Beaumont to McGraw have been dealt with by a discerning mind of unique ability to do justice to such a subject. The History deals also with the exploits of the doctor in war as well as in peace, for the Michigan doctor has been present in at least three wars, two of which have ranked among the decisive conflicts of the world.

AMERICA CONTRIBUTES

Next to this, Medicine in the United States by Packard, is an interesting volume. This book published about thirty years ago is concerned with the subject from the time of the American Revolution to the discovery by Long of Ether Anesthesia. American medical history may be supplemented to a certain extent by the contributions on the subject that appear in the Annals of Medical History edited by Packard and published by Paul B. Hoeber. The Annals of Medical History, which appears every two months, is history in the process of compilation. It is hoped that the author and editor may find occasion to bring Medicine in the United States up to date, truly a gigantic task.

In the history of general medicine both at home and abroad the volume that will be thought of immediately is History of Medicine by F. H. Garrison. Garrison's work is perhaps the best single volume history of medicine in existence. It deals clearly with the personalities who from the remote past have contributed to medicine up to the present time. It is rich in biographical detail.

An introduction to the History of Medicine by C. G. Cumston deals with the subject from the time of the Pharaohs to the end of the eighteenth century. The treatment is somewhat philosophic and takes a good deal for granted. The book will be better appreciated after the reader has obtained his historical foundation from one or two of the works giving the subject in greater detail. The Growth of Medicine from the Earliest Times to about 1800 by Albert H. Buck covers about the same field. It is a scholarly work which will repay careful study.

THE WORK OF SUDHOFF

The essays in the History of Medicine by Sudhoff

translated by Garrison and eleven others is a valuable addition to anyone's historical library. Garrison says in his biographical sketch of the author that Sudhoff is easily the greatest and most accomplished of all medical historians, the only one who has that mysterious natural faculty which Carlyle calls genius. The work is a collection of essays, forty-eight in all, on a great variety of subjects.

The writer would not feel at ease in his chair if he were to omit mention of the great contributions to medical history by Osler. There is no one in the English speaking world who has done more towards the encouragement of the medical historian than Osler. He was in the truest sense historically minded. Not only did he himself write, but he was an inspiration to others. Part of the charm of Osler's textbook on the Practice of Medicine was due to his historical treatment of the various subjects. Osler's work is about the only history of disease we have, that is, a book that deals with the history of disease apart from the personalities of medical history. The work of Moody on Paleopathology is the most original and exhaustive in existence on the subject of disease in prehistoric times. Osler's Evolution of Medicine is well illustrated and presented in the same unexampled diction of his textbook on medicine and his volumes of essays such as Equinamitas and the Alabama Student.

Another writer who as medical historian has a strong appeal to me is Dr. Charles Singer. His studies in the History and Method of Science is a monumental work in two volumes. Unfortunately the first volume is out of print and procurable only in the larger libraries. Singer's Short History of Medicine (1928) fills a distinct place among works of this class. It appeals to the educated layman as well as to the medically trained person. While surveying the subject from early Greek times, more than half the work is devoted to modern medicine. Singer has presented essentially a history of ideas keeping the personal element entirely in the background. It is in a sense an account of the evolution of the scientific method.

The Peaks of Medical History by Dr. Charles R. Dana is a splendid epitome of medical history dealing in a broad way with the various well defined epochs. This and a number of monographs, The Gold Headed Cane, Montaigne and Medicine, Laennec, Harvey, published by Paul Hoeber, are interesting contributions to the subject. Dana's book together with Osler's Evolution of Modern Medicine are splendid works for the beginner in Medical History, presenting as they do a succinct survey of the subject.

These are only a few works on this important subject. There are many others as well as works dealing with the evolution of various medical and surgical specialties. The personal library of every physician should contain one or more good works on medical history—something on general and one or two on his specialty. These are the only medical books in his possession that never become obsolete. Money spent on the history of medicine is a permanent investment.

J. H. Dempster

HIGH SCHOOLS SHOULD HAVE BEST TEACHERS, SAYS PHYSICIAN

The best trained educators should be working in high schools, guiding boys and girls through the important stage of adolescence, rather than teaching college students, who are not nearly so teachable, in the opinion of Dr. Daniel J. McCarthy, neurologist and professor at the University of Pennsylvania. "The beneficial effect of education in the average student does not extend beyond the eighteenth or nineteenth year," Dr. McCarthy states, basing his conclusion on his impressions from tests made while he was quiz-master in the medical school. "In dealing with the average mind, a specialized type of education in the later years disciplines the mind and thereby increases its efficiency, but does not increase inherent brain power."

Dr. McCarthy's tests at the medical school showed that students admitted to the medical school from high schools showed as high brain efficiency as college graduates who entered the medical courses. All of these students were from twenty to twenty-four years of age, and their brains were fully formed.

In the ideal educational system, boys and girls in their teens would be taught in small classes by highly trained teachers, Dr. McCarthy concludes.

—Science Service.

CHEMICAL MUFFLER REMOVES DEADLY AUTO GASES

A chemical device to replace mufflers on automobiles that will eliminate the deadly carbon monoxide contained in the exhaust gases has been developed by Dr. J. C. W. Frazer, professor and chairman of the department of chemistry at Johns Hopkins University, Baltimore. Since carbon monoxide, odorless, colorless, tasteless and poisonous swiftly in small concentrations, claims many lives each month through the carelessness of automobilists failing to open garage doors before warming up their engines, this latest chemical achievement is hailed as an important step in making the machine age less dangerous. Dr. Frazer declared that an automobile equipped with the new oxidizing device could be run in a closed garage without danger from carbon monoxide poisoning. Because of patent claims, he has not yet revealed the exact nature of the material that transforms the deadly carbon monoxide to carbon dioxide. But it is known that it is a catalyst, a substance that causes a chemical reaction without itself participating. It is similar in action to the catalyst, consisting of manganese dioxide and copper oxide, that was an outgrowth of chemical warfare work by Dr. Frazer and a laboratory staff during the World War. Fire departments and mine rescue squads use gas masks today that rely on this wartime catalyst for purifying the air of carbon monoxide.

For a year and a half, Dr. Frazer worked to develop the new catalyst that will add oxygen to carbon monoxide even when in direct contact with hot, moist gases. Laboratory tests and thousands of miles of road testing convince him that a canister of the catalyst substituted for the regulation muffler will not only deaden the noise of the engine explosions but remove all the unburned fuel gases in the exhaust, the ill-smelling ones as well as the deadly carbon monoxide. As about a third of the fuel is unconsumed in the engine cylinders, the small canister of catalyst has the task of burning half as much fuel as the engine does. Heat from this reaction may be utilized in some way in future installations, such as for car heating or preheating the fuel.—Science Service.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

American Medical Association, Detroit, June 23-27.

Dr. George McKean, of Detroit, is spending two months in California.

Dr. B. R. Corbus, of Grand Rapids, has returned from a month's vacation in Florida.

Dr. Angus McLean has returned home from six weeks' visit in Del Monte, California.

Dr. R. R. Smith, Grand Rapids, is expected to return this month from a Mediterranean tour.

One-Hundred and Tenth Annual Meeting Michigan State Medical Society, Benton Harbor, Sept. 15, 16, 17, 1930.

Be sure to read the announcement of the second intensive post-graduate course to be given in Detroit in June.

Dr. F. C. Warnshuis, Grand Rapids, addressed the East Side Physicians' Society of Detroit on "Organized Medicine" Feb. 26th.

Dr. R. D. Sleight, of Battle Creek, has made a prompt recovery after the removal of his appendix and has resumed his practice.

Dr. J. M. Robb, of Detroit, was operated upon for inguinal hernia and also chronic appendicitis on Feb. 27th. He is taking a few weeks' vacation before returning to his practice.

Dr. John L. Chester, of Detroit, who has been confined to Providence Hospital for a number of weeks with a carbuncle on the back of his neck, is reported recovering satisfactorily.

Mr. Herbert B. Barbour and Judge Joseph J. Monahan, of Detroit, addressed the Calhoun County Medical Society on Feb. 20th on the subject of medical jurisprudence and some phases of the leadership of the bar in society.

An order blank for Medical History was mailed each member during March. Only a limited order of copies will be placed with the printer. Do not court disappointment in not being able to secure a set. Send in your order before April 15th.

Dr. Hugh Cabot, Professor of Surgery at the University of Michigan since 1919 and Dean of the Medical School since 1921, has been made Senior Consultant in Surgery at the Mayo Clinic, Rochester, Minnesota. He is expected to enter upon his new work June 1st.

Dr. George C. Burr and Mrs. Burr, of Detroit, left on the 15th of March on the La France for a Mediterranean tour. They will leave the boat at Marseilles, France, and will visit Buda-Pesth, Paris and London, where Dr. Burr will take occasion to visit the clinics in which he is interested.

Dr. William C. Lawrence, of 1808 Stroh Bldg., Detroit, is Chairman of the Hotel Committee. Those expecting to attend the sessions of the A. M. A. will do well to communicate with Dr. Lawrence as early as possible so that the necessary hotel reservations may be made.

Dr. Austin Hayden, Marshall Field's Annex, Chicago (also treasurer of the A. M. A. as well as a recognized otolaryngologist), says that he has available for medical societies a 30-minute movie on Hearing Examination and Conservation which he made for the American Federation of Organizations for the Hard of Hearing.

Volume I, No. 1, of the Journal of the Detroit College of Medicine and Surgery has just come to hand. It is published by the Detroit Board of Education and edited by Dr. James E. Davis. This first number contains eight articles by members of the staff of the College. It is carefully edited and a credit both to Editor Davis and to the Detroit Board of Education.

A press report from Los Angeles, dated February 20, announces the acceptance from W. K. Kellogg of a sum of money to carry on the W. K. Kellogg Foundation for Cancer Research, in connection with the White Memorial Hospital. The item states that further experiments will be conducted with the serum treatment of Drs. Coffey and Humber, of San Francisco.—*Calhoun County Medical Society Bulletin*.

Among the articles in the first number, first volume of the Journal of the Detroit College of Medicine and Surgery are listed forty-four contributions to various medical and scientific publications, these contributions being the work of the faculty of the Detroit College of Medicine and Surgery during 1928. Of the total forty-four, eighteen have appeared in Volume No. 27 of the Journal of the Michigan State Medical Society.

One of the unique features in connection with the coming meeting of the A. M. A. in Detroit will be the opportunity offered members from a distance to arrive by aeroplane. Special rates of one fare and a half for the round trip from Chicago to Detroit and also from Buffalo to Detroit have been arranged and negotiations are about complete as we go to press for similar rates from more distant points in the United States to these two centers.

A get-together dinner was held by the East Side Medical Society of Detroit at Harmony Hall on the evening of March 6th. About two-hundred and sixty members of the East Side Medical Society and their guests were present. The out-of-town guests were Drs. J. D. Brook, President of the Michigan State Medical Society, Frederick C. Warnshuis, Secretary, and Dr. Pyle, Speaker of the House of Delegates. Mr. Harvey Campbell, Secretary and Vice-president of the Detroit Board of Commerce acted as Toastmaster. The guests were introduced to the Society and brief addresses were made by Judges Reid, Sweeney, McKinley and Guy Miller and Dr. Angus McLean as well as Representatives Culver and Milton Palmer and Mr. Harry Hulbert.

DEATHS

Word was received in Detroit on March 5th of the death of Dr. John Vernon White at the age of seventy years. Dr. White had practised for twenty-one years in Detroit as nose and throat specialist, having left Detroit for Coronado, California, about ten years ago. Dr. White had been in failing health for several years.

BRONCHOSINUSITIS DISEASE

W. W. Wasson, Denver, describes a clinical picture caused by certain inflammatory changes at the root of each lung. This portion of the lung seems to receive the force of the first attack of bronchosisinusitis disease so far as the lungs are concerned. In young children in whom the disease is uncomplicated, there is found at first an inflammation of the mucous lining of the trachea and bronchi. Later this inflammatory reaction spreads to the surrounding tissue so there is soon an increase in the connective tissue which surrounds and binds together the bronchi, arteries and veins. The hilum of the lung soon becomes a mass of this connective tissue, and when viewed by means of the roentgenogram the inflammatory reaction is well limited to the hila. Later the congestion and fibrous tissue increase may spread outward along the bronchi and arteries to involve even the primary lobules. Since there is considerable drainage by way of the bronchi, the lymphatics are not especially involved and the increase in the size of the lymphatic glands is markedly absent. The roentgenogram has proved to be an excellent means of studying the pathologic changes in the living person, and the autopsies have verified the roentgenographic observations in a surprisingly high percentage of the cases studied. This inflammatory reaction in the hila, with an increase in the connective tissue even to the extent of obscuring the bronchi and great vessels and usually fairly definitely limited to the hila, gives a very typical roentgenogram. Such a typical roentgenogram when combined with roentgenograms of the sinuses showing definite pathologic changes presents a roentgenographic syndrome which is pathognomonic of bronchosisinusitis disease. Such roentgenograms when verified by other studies definitely link together the entire respiratory tract. In fact, the roentgenologists may often foretell the conditions in the sinuses by the pathologic changes portrayed on the roentgenogram of the chest. The converse, however, is not true, as there can be sinus infection without the production of the typical changes of bronchosisinusitis disease. Likewise there are varying degrees of the reactions at the hila of the lungs. The pathology of bronchosisinusitis disease differs definitely from that of pulmonary tuberculosis. In the latter, the tubercle passes to the lymphatic nodes from the air cells and here sets up the typical tuberculous reaction as described by Krause. This reaction involves primarily the lymphatic system, producing congestion, fibrosis, calcification and caseations of the lymphatic glands, and some congestion of the air cells and bronchi. The first infection is nearly always in the periphery of the lungs with a reaction secondarily in the regional glands of the hila and mediastinum. There is therefore much more glandular increase at the hila and less connective tissue increase than in the typical case of bronchosisinusitis disease.—Journal A. M. A.

EARLY DIAGNOSIS OF BRAIN TUMORS MOST IMPORTANT

"By far the most important part in the treatment of brain tumors is to suspect them in the earliest stage," declared Dr. Walter E. Dandy of the Johns Hopkins University, Baltimore, at the meeting in Panama City of the Pan American Medical Association. Dr. Dandy is one of America's foremost brain surgeons. These masses of new tissue which grow in the brain cause a number of serious brain disorders. Paralysis, mental or nervous disorders, loss of vision or of hearing are among the conditions which may result from brain tumors.

"Brain tumors are among the most common tumors of the body," Dr. Dandy said. "Every brain tumor causing symptoms can now be diagnosed and localized with such precision that the tumor can be found at operation. About one-half of all tumors can be diagnosed and localized by neurological examination. The other half can only be diagnosed and localized by the use of ventriculography. This method is perfectly harmless if used correctly; it is very dangerous if not used correctly."

To perform ventriculography small openings are made, under a local anesthetic, in the back part of the head on both sides, Dr. Dandy explained. This requires only a few moments and is painless. The fluid is removed from one of the ventricles or small cavities on one side of the brain and exactly the same amount of air is injected in its place. By moving the air through the channels in which the cerebro-spinal fluid circulates every part of the ventricular system can be seen on the X-ray plate. Every tumor causing signs or symptoms of pressure within the skull will in some way change the size, shape or position of some part of the ventricular system. Interpretation of these changes tells the location of the tumor. The shadows shown in the X-ray plate are due to the fact that air is of lesser density than the fluid which it replaces and the X-ray therefore picks up the shadows from these areas of lesser density.

If there is no obstruction to the outflow of air from the ventricles to the space where it is absorbed, there is no danger. The danger comes when the ventricles are obstructed and the air cannot pass out of the ventricular system and, therefore, cannot be absorbed. To avoid this danger it is necessary either to remove the air by another puncture, or better to remove the tumor immediately, thus automatically releasing the obstruction to the exit of air. For this reason air injections should be done only by the surgeon who is prepared to follow with the operation immediately, if necessary, Dr. Dandy advised.

There is probably no diagnostic field in medicine in which greater accuracy can be obtained than this, Dr. Dandy declared. He said that as a result of the new method of localization and diagnosis, new operative methods for finding and removing brain tumors in inaccessible positions have been developed.

—Science Service.

SMALLPOX THREATENS IN MIDDLE WEST

Serious concern is felt by state health officers over the unusual prevalence of smallpox which has existed in the middle western states since the first of the year, shown in reports received at the U. S. Public Health Service Washington. The latest reports are that there were 269 cases in Ohio, 226 in Indiana, 147 in Illinois, 108 in Iowa, 60 in Missouri, 90 in Michigan and 38 in Wisconsin. Vaccination is a sure preventive of this loathsome and dangerous disease. Communities in which universal vaccination is the rule need not fear outbreaks of smallpox.

—Science Service.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

The titles of all books received by the Journal of the Michigan State Medical Society will be given in this column; and the appearance here of mention of the book, author and publisher is regarded as adequate acknowledgment. Books considered of special interest to our readers will be reviewed at length in future numbers of the Journal.

THE MEDICAL CLINICS OF NORTH AMERICA—(Issued serially, one number every other month.) Volume 13, No. 4 (Philadelphia Number, January 1930). Octavo of 301 pages, illustrated. Per Clinic year, July, 1929 to May, 1930. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

TREATMENT IN GENERAL PRACTICE—Harry Beckman, M.D., Professor of Pharmacology, Marquette University Medical School, Milwaukee, Wisconsin. Octavo volume of 899 pages. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, \$10.00 net.

The order of the subjects treated is the same as that of a standard work on the Practice of Medicine. Beginning with the section on infectious diseases which is alphabetically arranged we have discussed the treatment of about eighty pathological conditions. Then follow sections on Diseases Caused by Flukes, Diseases Caused by Worms, Diseases of Allergy, Deficiency Diseases, Diseases of Metabolism. Following these a large portion, over half the work, is devoted to the treatment of what might be termed diseases peculiar to certain regions of the body. There are sections on Acute Poisoning, Burns, Opium and Cocain Addiction, the various medicinal agents used in obstetric practice. The matter is well arranged and readily accessible.

That there is a place for such a work is beyond doubt. Many have deplored what they consider inadequate undergraduate training in the matter of treatment. This volume will go a long way to making up this deficiency. It shows evidence of careful preparation and the result of wide reading. There is a bibliography of over twenty pages comprising articles by a great number of the leading names in medical science the world over. The indications for the different therapeutic agents are discussed intelligently and at length. The subject of Therapeutics for the General Practitioner appears to be well covered.

RECENT ADVANCES IN MEDICINE, CLINICAL LABORATORY THERAPEUTICS—G. E. Beaumont, M.A., M.D., Oxon, and E. C. Dodds, M.D., Ph.D., Professor of Biochemistry, London; Fifth Edition with 49 Illustrations. P. Blakiston's Son and Company, Philadelphia, Pa. Price \$3.50.

This is the fifth revision of this work since its first appearance six years ago. In the present revision certain chapters which appeared in former editions have been omitted and new sections have been added. Forty-three pages are devoted to tests of Renal Function. The modified Sippy treatment of gastric ulcer is given at greater length and typical diet sheets for different stages are presented. The treatment of diabetic coma has been simplified. The liver treatment of pernicious anemia has been dealt with in greater detail. Other alterations of the text of former editions have been such as recent progress in this field of medicine has demanded.

A TEXT-BOOK ON ORTHOPEDIC SURGERY. Willis C. Campbell, M.D., F.A.C.S., Professor of Orthopedic Surgery, University of Tennessee, College of Medicine,

Memphis. Octavo volume of 705 pages, with 507 illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, \$8.50.

As stated by the author the purpose of this book is to present the subject of orthopedic surgery to the student, general practitioner and surgeon in a simple and comprehensive manner. The subject is dealt with under six different headings namely: I. Affections of Joints; II. Affections of Bone; III. Affections of Soft Tissue; IV. Affections of the Nervous System; V. Static Deformities; VI. Congenital Deformities. Some of the affections noted in this classification are not dealt with in most textbooks on orthopedic surgery, but because they are routinely treated by the orthopedist in his daily practice and taught by him in many medical schools he believes they should be included in a textbook on the subject. Two of the beginning chapters (about eighty pages) are devoted to orthopedic examination and apparatus. They are well illustrated by actual photographs and should be of special value to the general practitioner. Etiology and pathology are discussed in a simple and practical manner and particular emphasis is placed on differential diagnosis. All known methods of treatment and all types of operations are not discussed, but only those which the author has found most practical in his own experience. However, the principles of modern operative methods are defined and the technic is described in many instances. The more common affections, namely those which the general practitioner comes in contact with in his daily practice, are dealt with in detail rather than the rare conditions. This is a feature which makes the book especially valuable to those who are not specialists. The subject is covered in a very complete and simple manner in 666 pages containing 507 illustrations.

SUNLIGHT NOT GOOD FOR TUBERCULOSIS OF LUNGS

Heliotherapy, or treatment with the direct rays of the sun, in cases of tuberculosis of the lungs seems to be limited as to favorable results, Dr. Bernard L. Wyatt, of Tucson, Arizona, reported at the Minneapolis meeting of the American College of Physicians.

"It is clear that the series is too small for definite conclusions to be arrived at," Dr. Wyatt said after reporting his results with heliotherapy in some 200 cases of pulmonary tuberculosis, "but it is a matter of considerable interest that the number of patients showing appreciable improvement that might be attributed solely to direct heliotherapy was negligible."

Dr. Wyatt was careful to point out that because his studies were made under meteorologic conditions prevailing in southern Arizona, no generalizations would be drawn from them. Dr. Wyatt's experience with direct rays from the sun in treating other forms of tuberculosis was more gratifying, he reported. His observations on the limitations of this form of treatment in tuberculosis of the lungs was confirmed by the opinions of other authorities, he said.

"Sunlight which was formerly used extensively in Switzerland for the treatment of pulmonary tuberculosis, has been given up almost completely," he said, and also quoted a personal communication from Dr. Edgar Mayer of Saranac Lake, N. Y., who wrote: "As to the use of direct sunlight in pulmonary tuberculosis, I think that most of the reports have not been on controlled cases and therefore biased in its favor. We have given it a very fair trial here in the summer time and only in the rarest instances was I convinced that it helped."

—Science Service.

SOCIETY ACTIVITY

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Frederick C. Warnshuis, M. D.
Secretary Michigan State Medical Society

Our Medical History

Following three years of diligent editorial research and writing by our Committee on Medical History, headed by Dr. C. B. Burr of Flint, our History is ready for the press. It is expected that the first volume will be ready for distribution in April. Dr. Burr has in his own inimitable language and way compiled a most intensely interesting history of our Society and the profession in Michigan. It is written in very fascinating style. It includes the earliest days and records and in our opinion compares favorably with any published history of any state. It is not a dry biography of men and events. It is a scholarly, literary composition.

Every member will want a copy for his library. Your order is solicited now in order that we may determine how many copies to print.

The second volume will appear during the early summer. Each volume will contain about 800 pages well illustrated. The price is \$10.00 for the two volumes. Five dollars is to be sent with the order and the balance when notified that the second volume is ready for delivery.

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A. M. A. FELLOWSHIP

Attention is again directed toward the classification of American Medical Association affiliation. By virtue of your membership in your county and state medical society you are a *member* of the A. M. A. Unless you are a *Fellow of the A. M. A.*, you cannot register at the Detroit meeting. You will be denied admission to the Scientific and Commercial Exhibits. You cannot participate in the scientific sectional meetings nor can you gain admission to the social functions.

To enjoy and profit from these sessions you must become a *Fellow of the A. M. A.*

To become a Fellow you must fill out a Fellowship Application, send it to the State Secretary for countersignature and remit Seven Dollars (\$7.00) for annual dues. In return you will receive weekly the *Journal of the American Medical Association* and be privileged to participate in all the functions of the annual meeting.

The Detroit session promises to be an outstanding one. No Michigan physician can afford foregoing attendance. A. M. A. annual sessions excel all other national meetings. Other national meetings charge a registration fee of from five to ten dollars; the benefits cease on termination of the sessions, which are never as profitable or instructive as the annual meeting of the A. M. A. By becoming a *Fellow of the A. M. A.* your annual dues permit you to participate in the annual meeting, it gives you weekly the *Journal of the A. M. A.*, than which there is no better medical journal, and you are supporting your parent national organization that is persistently and continuously functioning for your interests.

Send in your application today. Blanks may be secured from your county secretary. Remember, unless you are a *Fellow* you will be unable to attend the Detroit session.

ILLEGAL PRACTICE

That our laws governing the right to practice are frequently violated is not denied. Violations exist and violators persist in their illegal practice. Inquiry is frequently made as to why these violations are allowed to go on without prosecution and law enforcement. The answer is simple: the prosecuting attorney of your county and the police powers of your county fail to enforce the law and fail to apprehend the guilty parties.

Our medical act places the enforcement

of the law in the hands of the local prosecuting attorney. The Board of Registration has no power to enforce the law. When information comes to the Board that the law is being violated the Board places the information in the hands of the county prosecutor. The Board can do no more because the law limits its powers.

Obviously your State Medical Society can not function as a police power of the state. It cannot undertake investigations or prosecutions. It places its information of violations in the hands of the local prosecutor and there its activities cease.

The burden of enforcement rests upon your county prosecuting attorney. If violations exist in your county that fact should be drawn to the attention of your prosecutor and be accompanied by an urgent request that he institute the proper procedure to bring the violator into court. Individuals dislike to file complaints. County Societies should, therefore, as a group, through its officers or through a special committee interview your prosecuting attorney and request him to enforce our medical practice act in your county.

PORTER NARCOTIC BILL

Representative Porter of Pennsylvania is sponsoring "Bill H. R. 9054," a proposed penal statute to further control the administration of opium and morphine. If this bill is passed it will require every doctor to apply for another license in addition to his Harrison Narcotic license. But that is not the worst feature. The bill creates a Narcotic Bureau with a Commissioner at its head. The Commissioner is invested with almost unlimited authority. He can arbitrarily decide who shall receive a license, he can revoke licenses at will, he can demand what reports he wishes, he can subpoena you and your records at will and in any part of the country, he can prescribe such rules and regulations as his fancy determines. The law would place an intolerable burden upon every doctor.

If the bill gave any promise of being effective and would control opium smuggling and addiction, we would be inclined to waive objection. The proposed bill, however, does not provide any meritorious measures nor does it provide any additional means to control opium traffic. All that it does is to create another Bureau and places upon doctors intolerable regulations. Existing laws, en-

forced, are ample and are sufficient to control opium traffic. Additional laws are not required.

Those who are concerned with the opium problem are apparently visionary in their conclusions. Without supporting evidence or figures they assert many things and lay the blame for addiction at the door of the medical profession. Actual facts refute this assertion and place the blame upon smugglers and illegal diversions. Let these proponents become insistent upon rigid enforcement of existing laws and then the main factors causing opium addiction will be under control. An autocratic opium commissioner is uncalled for.

Therefore, every member is urged to write to our Michigan senators and congressmen, protesting the passage of H. R. 9054 and urge that the measure be defeated. File your protest today.

MINUTES OF THE MARCH MEETING OF THE EXECUTIVE COMMITTEE OF THE COUNCIL OF THE MICHIGAN STATE MEDICAL SOCIETY

The Executive Committee of the Council of the Michigan State Medical Society met in Joint session with the Chairmen and Secretaries of the Scientific Sections at the Book-Cadillac Hotel, Detroit, March 17, 1930.

Present:

Chairmen—R. C. Stone, J. D. Bruce, B. R. Corbus, G. L. LeFevre, Henry Cook, J. H. Charters; president, J. D. Brook; editor, J. H. Dempster; secretary, F. C. Warnshuis, and the section officers.

Considerable time was spent discussing the features for the scientific program for the annual meeting.

1. On motion of Corbus-Cook, September 15, 16 and 17 were designated as the dates for holding our annual meeting in Benton Harbor and St. Joe.

2. On motion of Corbus-Bruce, the section officers were directed to restrict the number of invited essayists before their respective sections to two men whose total mileage of travel should not exceed one thousand miles. The secretaries, however, are privileged to invite three or four men as guests of their section, provided their mileage did not total more than one thousand miles.

3. Approval was granted to a recom-

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mendation by section officers that a symposium be held in the morning of the second day on the subject of Peptic Ulcer, in which symposium the sections on Surgery and Medicine will combine.

4. The Secretary presented a communication from the Ingham County Medical Society in which they surrendered their charter as a county organization. Upon motion of LeFevre-Bruce the Secretary was directed to cancel the charter of the Ingham County Medical Society.

5. Upon motion of Bruce-Cook, the Secretary and the Chairman of the Council's committee on county society work

were instructed to confer with Councilor Green relative to the arrangement of the proposed Post Graduate Conference in his district to which a number of out-of-state guests had been invited.

6. The Secretary reported upon the slowness with which subscriptions were coming in for the Medical History. Upon motion of Corbus-Le Fevre, the Secretary was instructed to take up with the County Secretaries the question of individual solicitation of their members for subscription to this history.

7. The Secretary presented a communication from the Council of the Wayne County Medical Society in which the Council was petitioned to make an appropriation of funds to the work of the Wayne County Medical Society. Upon motion of Le Fevre-Cook, the Secretary was instructed to review in detail the experiment that had been conducted and to call the attention of the Council of the Wayne County Medical Society to the last communications that had been addressed to them, and to further advise them that the experiment terminated in January, 1929, and that the funds of the Society, due to the obligations that had been incurred and the activities that are being conducted, do not permit the State Society to make any further contributions to the treasury of the Wayne County Medical Society.

8. The question was raised as to the Legislative program of the State Society. After considerable discussion the Secretary was directed to invite Dr. Sundwall, Chairman of the State Legislative Committee, to attend the next session of the Executive Committee.

9. The Secretary presented a communication from the National Food Bureau requesting the State Society's endorsement of its educational campaign to be conducted in Michigan in April. Upon motion of Cook-Corbus, the Secretary was directed to convey to the National Food Bureau its organizational endorsement of this campaign.

There being no further business the meeting adjourned at 10:40 P. M.

F. C. WARNSHUIS,
Secretary.

DUES PAYABLE

Members are reminded that their 1930 dues are payable by April 10th. Unless they

are remitted by your county secretary by April 25th you will be placed on the suspended list. Suspended members are without legal protection during the period of suspension and the Journal is discontinued. Please obviate such a necessity. Send your check to your county secretary today.

HISTORY SUBSCRIPTIONS

The response to the announcement that the History of Medicine in Michigan had been sent to the printers and that advance subscriptions were requested has been very disappointing. Members apparently failed to realize that advance subscriptions were essential in order to determine the number of sets to be ordered from the printer. There will be no second printing. The number of sets ordered will be limited to the subscriptions received.

It is quite certain that when you see the set you will want it for your library. It will be impossible to secure a set if you failed to subscribe. It becomes imperative to send in your subscription in advance. Send in your order today.

GOOD WORK

The East Side Physicians Society of Detroit held its annual Stag Dinner on March 6. Some three hundred Detroit physicians were present. Their guests included the Mayor, Judges of the Detroit bench, Legislative representatives, some state officials and prominent business men. It was a most enjoyable occasion. This begetting of acquaintanceship between the profession and public officials will lead to a better understanding of our mutual problems. Other localities should pursue a similar plan. Congratulations are extended to this East Side Society for this good work.

COUNTY SOCIETIES

GRATIOT-ISABELLA-CLARE COUNTY MEDICAL SOCIETY

The February meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright House, Alma, Thursday, February 20th.

Dinner was served to sixteen members and three visitors.

The minutes of the previous meeting were read and approved. President Budge then introduced Dr. Grover C. Penberthy, whose subject was "Empyema." The doctor described what he called the conservative surgical treatment of empyema in children, which in brief is the removal of the fluid or pus without allowing air to enter the pleural cavity, thereby preventing pneumothorax. A catheter is introduced through a trocar, a clamp is kept on the catheter, except when suction is applied. The subject was illustrated by slides. Then some questions were asked Dr. Penberthy.

President Budge next introduced Dr. E. C. Davidson, whose subject was "The Treatment of Burns in Children." The doctor gave some statistics as to the most common causes of burns in children and then took up the treatment. First, efforts are made to prevent shock; if present, it is treated by introducing saline, either subcutaneous, intravenous or rectal. The burned area is cleaned of all dead or loose tissue and sprayed with a 5 per cent aqueous solution of tannic acid every 15 minutes until it turns brown and forms a covering about like parchment paper. This is left on until it comes off easily, usually from 14 to 21 days. If epithelization has not taken place by this time, skin grafting is done. This subject was well illustrated by slides.

After a short discussion President Budge, on behalf of the Society, thanked the doctors for these very interesting papers.

Meeting adjourned.

E. M. HIGHFIELD, *Secretary*.

LENAWEE COUNTY MEDICAL SOCIETY

Regular meeting of the Lenawee County Medical Society at the Adrian City Club, Thursday, February 20th. Fourteen members present. This meeting followed an all-day Tuberculosis Clinic at the Adrian City Hall under the auspices of the Michigan Tuberculosis Association, conducted by Dr. Toan of the Association and Dr. Hudson of Detroit, who is specializing in the surgical aspects of the treatment of tuberculosis.

Dinner was served at seven. In the absence of President Marsh and Vice-President Veazey, the meeting was called to order by the Secretary. After a short business session, the members with their guests retired to the third floor of the Club. We were very glad indeed to welcome as guests Dr. Fenton of Reading, the veteran Secretary of the Hillsdale County Society, and his son-in-law, Mr. George Schermerhorn of Reading. Dr. Fenton, though in the eighties, is still hale and hearty and in very active practice. It was a special pleasure to welcome him to our midst in view of the fact that he made the long drive to Adrian and returned the same night especially to attend this meeting. We wish this might serve as an inspiration to some of those far younger who find it hard to attend their County Society meetings regularly because it is so far to go when they are tired.

Dr. Hudson, assisted by Dr. Toan, showed some very fine slides of foreign bodies in the bronchi, and tuberculosis of the lungs. This was followed by moving pictures of the lungs during the act of respiration in the opened thorax of a dog, demonstrating the rotation of the lungs. Then there were slides showing the possibilities of surgical relief in unilateral tuberculosis, by putting the lung at rest through artificial pneumothorax and thoracoplasty. Finally we were shown some moving pictures, taken through an X-ray apparatus, of a lung in which some of the bronchi had been injected with lipidol. These demonstrated the original research of Dr.

Hudson on the way the bronchi emptied themselves of their secretion by rhythmical muscular contractions of their muscular coats, and not by coughing alone as had been supposed.

Great satisfaction was expressed by several members with Dr. Hudson's pictures and his lucid discussion of the problem of tuberculosis in what had been one of its most hopeless forms.

C. H. WESTGATE, *Secretary*.

KALAMAZOO ACADEMY

Following the regular monthly dinner the meeting was called to order by the President, Dr. J. C. Maxwell.

Dr. A. H. Rockwell asked for coöperation of the Academy in instituting some method whereby immunization for diphtheria could be carried out more intensely in Kalamazoo. The method he thought practical was to establish clinics in schools, for both school and pre-school children. These to be conducted by the physicians, who would receive remuneration for their work. No definite action was taken on his suggestion at this meeting.

Dr. C. J. Ettinger, Professor of Sociology, Western State Teachers College, gave a talk on the "Philosophy of Conflicting Opinions."

The minutes of the previous meeting as printed in the bulletin were approved.

There were no committees to report.

A communication from Dr. Collisi of the committee on industrial relations was read. Dr. F. E. Andrews called attention of the Academy to a report of this committee which recently appeared in the Michigan State Medical Journal. Dr. Andrews moved that the society investigate to ascertain whether or not the former committee on industrial relations was now active. Seconded. Carried.

Dr. J. B. Jackson moved that the Academy go on record as supporting Dr. Collisi and his committee and that a committee be appointed. Seconded by Dr. Andrews. Carried. Under discussion Dr. L. J. Crum brought up the point whether or not physicians should consult with osteopaths and cited letters received from Dr. Bruce and Dr. West, who disapproved of this. No action taken on this matter.

Applications for membership of Dr. Crawford and Dr. Damstra were read.

Dr. VanNess spoke briefly of the hospital situation in Allegan.

The scientific program was given by Sumner L. Koch. He was introduced by Dr. W. E. Shackleton. His talk on Infections of the Hand was certainly very instructive regarding the diagnosis and treatment to be used. I am sure that no clearer presentation could have been given on this subject. Slides, X-rays and diagrams well illustrated the various points that he stressed. The talk was discussed by Drs. Shackleton, Crum, F. T. Andrews, Goodrich, Collins, Stewart and Stryker.

Meeting adjourned.

JACKSON COUNTY

The January meeting of the Jackson County Medical Society was called to order by our new president, Dr. Randall Cooley, at the Hayes Hotel. Fifty-two members were present for the dinner. Dr. Riley was absent and Dr. Shaeffer, chairman for the evening program, acted pro tem.

No reports or new business was received. The scientific meeting immediately followed. Dr. Shaeffer reported the sale of forty-one season tickets at \$10.00 per ticket and twelve single tickets for the January meeting. Dr. C. C. Young, director of the State Public Health Laboratories, was introduced by the chairman for the evening. Dr. Young chose

as his subject, "The Use and Abuse of Biological Products."

He outlined the idea of their use in the prevention of diseases and the need of more teaching in the medical schools. Few textbooks contain authentic information and the practicing physician must rely upon the "word of mouth" for his information. There are ten firms in the United States who manufacture biological products, and they publish some valuable information about their own products.

The subject of immunizing against smallpox, diphtheria and scarlet fever was discussed and the actual technique described. In vaccination of individuals against smallpox, he stressed the point of avoiding shields or tight dressing, of cleansing with a solution which dissolves the fatty secretions, such as zylol, ether and benzine. The harsh rubbing of the skin is to be avoided.

In describing toxin antitoxin administration, he touched upon the practical side of physicians themselves administering the product instead of permitting the health department to do it gratis. In commenting upon the toxoid, he said no preservative can be used at present in the product. This has caused deaths abroad and the State Laboratory will not release it to the public in Michigan. Goat serum toxin antitoxin is of little value.

In regard to scarlet fever he pointed out that we are not at present seeing many malignant cases. Therefore, as a group procedure in schools he is not in favor of active immunization. Passive immunization is only indicated in the severe toxic cases early. Passive immunity lasts only twenty-one days and the contacts who might have been immunized might develop scarlet fever in the twenty-eight day period of quarantine.

In closing he stated he knew of no biologic treatment which was one hundred per cent sure. He expressed the feeling that the State Laboratory was working for the doctor and not the public. In the discussion which followed many ideas were brought out. The meeting then adjourned.

CALHOUN COUNTY

The February meeting of the Calhoun County Medical Society was held at the Veterans' Bureau Hospital, No. 100, Tuesday, February 4, 1930. Through the kindness of the hospital staff the meeting was preceded by a complimentary dinner in the dining room of the nurses' home, some fifty members of the society being present. During the dinner hour music was furnished by the hospital orchestra.

After a few words of welcome by the Hospital Director, Dr. H. G. Clark, a short business session was held. The minutes of the previous meeting, as printed in Bulletin, Vol. XIII, No. 2, were approved. A letter from the Calhoun County Bar Association, inviting the members, their wives and ladies to join them in a formal dinner and program to be held at the Battle Creek Country Club, Thursday evening, February 20th, was read, and it was voted to accept the invitation. Individual invitations were to be issued later.

Dr. J. E. Rosenfeld reported that through his attorney he had understood that in order to reach a proper settlement of bills, involving the care of indigent cases, the Poor Commissioner had agreed to abide by the decisions of an arbitration committee, and two members by the Judge of the Circuit Court. It was moved and carried that the Society appoint three members and that the Circuit Judge be asked to appoint the other two.

Committee: A. F. Kingsley, C. R. Hills, A. M. Giddings.

Dr. Stone called attention to the forthcoming His-

tory of Medicine in Michigan by Dr. Burr, which is about to be published, and urged each member to co-operate by sending \$5.00, covering the cost of the first volume. The secretary offered to send in any orders sent to his office.

The following bills were ordered paid:

1. Battle Creek Sanitarium for Lantern and Operator\$4.40
2. Flowers 9.00
3. Secretary Expense 7.70

The meeting was turned over to Dr. Hentz, chief of staff of the Veterans' Hospital, who called upon his associates to put on the clinical program.

Dr. Salisbury showed an advanced case of multiple sclerosis, and a case of epidemic encephalitis with Parkinsonian syndrome, giving the history of the development of these cases in detail. These two cases were discussed by W. H. Riley.

Dr. Walch presented a case of paranoid precox, showing high grade delusions with expansive ideas, whose chief thought and mental slant hinged about the war.

Dr. Ottis Like presented a case of hebephrenic precox, with loss of emotional interest but with hallucinations of grandeur, and with very active speech centers.

Dr. Hentz presented two cases of catatonic precox with emaciation, negativism, delusion, suspicions, and with statue rigidity of body in any particular pose. He stated that 75 per cent of the cases in the hospital were made up of various types of precox, and that 20 per cent were those of general paralysis. The war was given as an exciting cause in that class of individuals who were unable to adjust themselves to strain.

Members present, 50.

HARRY B. KNAPP, *Secretary*.

OAKLAND COUNTY

About 60 members of Oakland County Medical Society and Pontiac City Hospital staff in joint luncheon session at the hospital voted to recommend to the City Commission that the name of the hospital be changed to Pontiac General Hospital. It was decided that the recommendation should suggest the change be made effective at the formal opening of the unit now under construction.

It was pointed out that the proposed name bears a more general significance.

The program was of scientific nature with speakers and subjects as follows: Dr. George A. Sherman and Dr. R. H. Baker, "Multiple Neurofibromatosis"; Dr. Edward Howlett, "Traumatic Paralysis"; Dr. H. A. St. John, "Toxemia of Pregnancy"; and Dr. L. F. Cobb, "Prostatic Hypertrophy."

Dr. Robert G. Owen, Detroit, was a guest at the meeting. Dr. Frederick A. Baker was in charge of the program.

BERRIEN COUNTY

The Berrien County Society held their first meeting of 1930 at the Hotel Whitcomb in St. Joseph on Wednesday evening the 19th of February.

There were 35 at dinner and several others came in later for the business meeting and the paper following.

At the business meeting plans were further outlined for the state meeting to be held in September. Suggested dates were for the second or third weeks as hotel accommodations would be best and fruit season at its height. Dr. McDermott announced

the standing committees for 1930 as follows: Legislative, Herbert Kling, Abbe Henderson of Niles and C. A. Mitchell of Benton Harbor; Executive, H. O. Westervelt, Benton Harbor, Warren Smith, Berrien Springs, and C. W. Merritt of St. Joseph; Membership, John Ames, Niles, F. J. Witt, St. Joseph, and R. B. Howard of Benton Harbor; Grievance or Censors, F. W. Brown, Watervliet, H. J. Burrell, Benton Harbor, and D. A. Van Noppen of Niles.

Dr. Warnshuis' letter regarding committees for the state meeting was read. These committees were tentatively named and plans made for meeting to work out details under the head of a general chairman.

The Women's Auxiliary also met in the lobby of the hotel under the leadership of Mrs. Henry Bartlett of St. Joseph, the President, and made plans for entertaining the wives of doctors attending the convention. It is their plan to provide plenty of entertainment so that women attending will not have to look to their husbands for company during the meeting.

Applications for membership were handed to the membership committee from Dr. Gordon Rice of Watervliet, Dr. Clayton Emery of St. Joseph.

The speaker of the evening was Dr. John Hodgen of Grand Rapids. His talk was on fractures, dealing mainly with the Colles type. His paper was accompanied by lantern slides showing the anatomical construction of the wrist, articulation as well as X-ray pictures illustrating the before and after results of fractures.

The things emphasized particularly were the over-extension to break up impactions and splinting in extreme flexion by means of anterior and posterior plaster splints.

There was a lengthy discussion of the talk deviating into points not brought out in the paper: the old discussion of "to plate or not to plate," types of splints, when to do the open operation, etc. The paper was excellently delivered and the discussion extremely interesting and worth while.

The next meeting will be held in Niles in March. Entertainment will be provided by the members from that town.

W. C. ELLET, M.D., *Secretary*.

ST. JOSEPH COUNTY SOCIETY

The St. Joseph County Society held their March meeting on the fourteenth at the Klesner hotel in Centreville. As no arrangement had been made for an outside speaker several members reported recent interesting cases from their private practice. Dr. D. C. Weir of Three Rivers reported a case of cerebral embolus, Dr. Ray Dean reported a case of pulmonary edema, and Dr. G. J. Sweetland of Constantine reported a case of eclampsia. A round table discussion of these cases followed.

It was then decided to mail to each member a Cabot case history one week before the next meeting. At the meeting each member will discuss the case and give his diagnosis. After all have made their diagnosis the Case Report diagnosis will be read. We are looking forward to a fine and very profitable evening.

A committee consisting of Dr. John O'Dell and Ray Dean of Three Rivers and Dr. D. M. Kane of Sturgis was appointed to revise the prices for indigent cases.

Election of officers was then held. Dr. G. J. Sweetland, former secretary, was elected president, and R. A. Springer, secretary. Dr. C. G. Morris was elected delegate to the State Society.

R. A. SPRINGER.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. L. J. HARRIS, President, Jackson, Mich.

MRS. J. EARL McINTYRE, Secretary, Lansing, Mich.

Do you remember how Chaucer in his Prologue to the Canterbury Tales says,

"Whan that Aprille with his shoures sote

The droghte of Marche hath perced to the rote"
and continues with,

"So priketh hem nature in hir corages

Than longen folk to goon on pilgrimages."

So many of our board and members of the auxiliary also have felt that longing to go on "pilgrimages" that really there are very few of us left, apparently, to keep the home fires burning.

There is plenty of fuel, however, we find, from reports of other states, and many interesting activities for county or city societies. In a letter recently received from Mrs. E. V. DePew, San Antonio, Texas, who is a chairman of the National program committee, she has inclosed a study program and says that others will be sent upon request. If your society has some definite object in view and meets regularly, you will find that you are living up to the object of the organization in "promoting acquaintanceship among doctors' families that closer fellowship may exist and do such other work as may be assigned from time to time, by the Michigan State Medical Society."

It is doubtless pretty well known to our physician husbands, if not to all wives, that the Eighty-first Annual Session of the American Medical Association occurs in Detroit June 23 and 27 inclusive. The Michigan State Medical Society and Auxiliary will grasp this opportunity not only of welcoming their guests to the State but will be there en masse to meet them. Michigan has a great deal to learn from the other States of organization as well as activities. It will also be a privilege to meet the National Officers and enjoy the program and social courtesies which will be extended to delegates. If you are near enough to Detroit to drive in for a day, plan to do that, if you are unable to spend all the time over which the session extends.

At a board meeting in Jackson in January Mrs. Kiefer was appointed Extension Chairman. As soon as the weather permits, Mrs. Kiefer and your president hope to organize other counties and perhaps call on some of the societies. Mrs. Bartlett of Saint Joseph was appointed chairman of the Hygeia Magazine committee. If you have subscriptions to renew or new ones to add, she will take care of them, as the state is anxious to increase its subscription list.

Most cordially,

MRS. L. J. HARRIS, *President*.

Mrs. Basil Loren Connolly of Detroit was appointed local chairman and member of the National Social Committee, and your state president, Mrs. Lester J. Harris, was also honored by being appointed to that same permanent committee when Mrs. Southgate Leigh, National Chairman, visited Detroit recently.

Mrs. Leigh is working with local committees in their plans for the coming National Auxiliary Convention to be held in Detroit, in connection with the American Medical Association, from June 23 to 27.

Convention headquarters for the Auxiliary are to be at the Tuller Hotel. The state auxiliary is entitled to one delegate and one alternate for every one hundred paid members or fraction thereof.

Dues must be at the secretary's desk by March 31.

Of General Medical and Surgical Interest

SCIENCE AND CULTISM

Now and then the medical profession is upbraided by the proponents of various notions in the field of health and science because it fails to give to their claims what they conceive to be adequate consideration according to an editorial in the February 1 Number of the Journal of the American Medical Association. Again and again, the difficulties of Galileo, Harvey, Jenner and Pasteur, when they attempted to convince the leaders of their times of the importance of their discoveries, are cited as evidence that scientists are intolerant. Apparently cultists and others who have had but little experience in reasoning and logic, or with what is known as the scientific method, fail to take into account the fact that the world has moved since the time of the prophets, and that science has advanced more in the past fifty years than in the previous fifty centuries. James Harvey Robinson wrote an interesting essay on "The Importance of Being Historically Minded." With a proper perspective, one realizes that science is today in a position to demand evidence to an extent that might not have been warranted in a previous period when the whole world was dominated by magic and mysticism.

Recently, Mr. Chester Rowell, feature writer for the San Francisco Chronicle, discussed the appeal for tolerance made by faith-healing cults in the Los Angeles Times, following an exposé by the editor of the Journal of some of the weird quackeries existing in Los Angeles. Mr. Rowell says:

But the appeal for "tolerance," by one "school" of another, is an example of a common fallacy. There is no "tolerance" of astrology by astronomers. There is no "tolerance" of fortune-telling by psychologists, nor of perpetual motion inventors by physicists. Geologists do not locate oil or water by dowsing with a forked stick, nor "tolerate" those who do. Entomologists do not "tolerate" those who would exterminate insect pests by interfering with their spontaneous generation. Scientific agriculture does not "tolerate" the theory that potatoes grow wrong unless planted in the dark of the moon. All these "schools" exist, and they are all rejected outright as unscientific superstitions by every scientist in the world.

On the other hand, good Catholics tolerate the Holy Rollers, and Buddhists tolerate the Mormons. Atheists tolerate the faith of Christians and Christians the unfaith of atheists. Protestants and Christian scientists tolerate each other's religion, each respecting the right of the other to seek God in his own way. But the law of the land did not tolerate polygamy, when the Mormons said it was religion, and the Regents of the University of California do not permit an antivaccinationist student to endanger the health of other students, even though he calls his objection religious.

So in medicine. If it were a matter of faith, dogma or canons, one "school" should "tolerate" another. If it is a matter of science, then the only distinction is that of scientific and unscientific. And between science and non-science there is no equality of right, and no basis for tolerance. The fact that millions of devout people in India believe in casting their horoscopes by the stars does not erect them into a "school" of astronomy, nor impose on astronomy any obligation to recognize them. They are neither "regular" nor "irregular" astronomers

—they are not astronomers at all. Neither is any unscientific theory or practice of healing any part of the science of medicine. There are only two sorts of medicine, scientific and unscientific. And of the unscientific "schools," science has only this to say—that they are unscientific.

How, then, shall we distinguish which principles and practices of healing are scientific, and which are not? The simplest test is that which we unhesitatingly apply in every other branch of knowledge. That is the judgment of scientists. If the scientists say that a certain thing is scientific, we accept it as such. If they all say it is unscientific, we say likewise, at least until it has succeeded in convincing them. Every scientific university in the world teaches astronomy, and not one teaches astrology. All of them teach chemistry and not one teaches alchemy. Every university in the world teaches scientific medicine, and not one of them—not a single one in the whole world—teaches or recognizes any of the "schools" or sects for which the Times speaks. If the unanimous voice of science means anything, this is its verdict.

The next test, and the decisive one, is that of method. Scientists may be mistaken, sometimes, in their results and conclusions. Sometimes a thing which seems true in the light of incomplete information becomes only partly true in the light of later discoveries. But science is not mistaken in its method. That method is systematic observation and experiment, and the submission of these observations and experiments to the scientists of the world, for them to repeat, to test and to scrutinize. Whatever pursues that method and is approved by that test is scientific—including, in medicine, light rays for tuberculosis, diet for many ailments and hydrotherapy for certain mental conditions. Whatever does not proceed by that method, or fails by that test, is unscientific—including all the cults, sects and schools which Dr. Fishbein rejects and the Times defends.

Mr. Rowell has placed his finger unerringly on the weakness of the cultists. His logic might well serve as a text in the schools, not only that it might aid the younger generation in learning the art of reasoning and judgment, but also that physicians might realize the basic folly of the strange schemes which are constantly being introduced to the public around them.

GALL BLADDER DISEASE MOST FREQUENT CAUSE OF "STOMACH TROUBLE"

"The most frequent single cause of 'stomach trouble' was disease of the gallbladder," Dr. Walter C. Alvarez of the Mayo Clinic, Rochester, Minnesota, found in 500 consecutive cases of indigestion or abdominal distress reviewed before the American College of Physicians at its recent meeting in Minneapolis.

"Actual disease of the stomach could be demonstrated in only 12 of the 500 cases," Dr. Alvarez stated. "As Dr. W. J. Mayo long ago pointed out, the stomach often serves as a firebox to call attention to a conflagration elsewhere in the body. In many of these patients the fire was far away, in the brain, the teeth, the thyroid, lung, heart, spine, kidney, bladder, uterus, or blood vessels."

Definite disease of the digestive tract, such as

inflammation of the gall-bladder, ulceration or cancerous changes in the intestines and stomach, or appendicitis was found in 175 cases or one-third the total number.

"In 43 cases the indigestion was thought to be due primarily to nervousness and in 50 more it appeared to be due to the congenitally frail, sensitive, or psychopathic make-up of the patient," Dr. Alvarez said. "In a number of cases it was due to the fact that husband and wife were at swords' points and the meals were being eaten to the accompaniment of bitter words. Often the patient was so nervous, so querulous, or so badly upset by fatigue and worry that it was hard to know what significance to attach to the symptoms, and the operation which would have been prescribed for a strong phlegmatic person with the same complaints was hardly thought of."

Some of the patients complaining of stomach trouble were relieved by a simple change in diet. In other patients the cause of the trouble was thought to be in the nerves or brain, with the stomach distress merely secondary. For these patients operation was not advised. Dr. Alvarez said further:

"In many cases the inability of the physician to make a positive diagnosis was due to the unwillingness of the patient to remain for a sufficient time under observation or to return when new symptoms appeared. Let us say that a woman has an attack of acute indigestion with pain in the upper abdomen and vomiting. It looks to her and her physician as if she must have eaten some spoiled food. But let her have four such attacks in six months with perhaps a little jaundice after one of them and it becomes obvious even to a layman that the biliary tract is probably diseased. The surest way in which to get a diagnosis is to return each time to the same physician, so that he can see the complete picture of the disease: the surest way in which to get poor treatment is to change physicians with each attack and to show each one only one short puzzling episode in a long-lasting, slowly developing chronic disease."—Science Service.

SENATORS TO DISCUSS GOVERNMENT CANCER PROGRAM

A group of United States Senators will shortly sit across the table from medical men and research specialists and try to decide what program the government should undertake in seeking the cause and cure of cancer.

Senator William J. Harris, of Georgia, heads a new subcommittee of the Commerce Committee, which will look into the recommendations already made by many of the country's most eminent surgeons and laboratory workers.

It is expected that many of those who have already written to the committee will appear in person for questioning and consultation. The head of the U. S. Public Health Service, Surgeon General Hugh S. Cummings, will probably be present at many of the meetings, and will assist in shaping whatever plans are adopted for governmental monetary aid, laboratories, or arrangements for government workers to conduct researches in laboratories already established.—Science Service.

CAUSE OF CATARACT AND NONOPERATIVE TREATMENT OF INCIPIENT "SENILE" CATARACT

John E. Weeks, New York, asserts that except in the relatively few cases of occupational cataract, the development of spontaneous cataract is due to nu-

tritional irregularities, such as a lack of a sufficient supply of acceptable pabulum or the presence of toxins in the pabulum supplied (as in diabetes, intestinal disturbances, and foci of infection), or to endocrinopathy. While it is not possible to restore degenerated lens tissue, much can be done, particularly in the early stage of the development of cataract, to arrest or to retard its development by improving systemic and local nutrition. In the endeavor to arrest or to retard the development of senile cataract, Weeks determined to supplement improvement in general health by improvement in local nutrition, if possible, by periodically increasing the flow of blood in the anterior tissues of the eye. A number of measures were tried; eventually a mixture of equal parts of a solution of boric acid, 3 per cent, and glycerin was selected. It was found that this mixture, when instilled into the eye, produced a sharp, smarting sensation, lasting about a minute, and an active hyperemia. Hyperemia always follows the instillation of this mixture; tolerance, such as follows repeated instillations of ethyl-morphine hydrochloride, is not established; consequently it can be used indefinitely with the assurance of a uniform result. Patients were advised to instill the drops once daily, at night, in cases in which there was very little lens opacity; twice daily in more advanced cases. Although there is little danger of bacterial contamination, patients were advised to have the drops made fresh every month or six weeks. Treatment was discontinued only when arrest in the development of the cataract was assured. Patients were advised to report every six months or a year, or oftener if they thought necessary. All patients were notified of the presence of lenticular opacities (the term cataract was avoided when it was thought advisable) and thoroughly advised of the importance of the regular and persistent use of the drops. Patients were referred to their family physician for a thorough physical examination and were advised to have any conditions detrimental to health corrected, if possible. The tension of the eyeballs was tested in all cases by means of the tonometer (Schiotz) after it became available, whenever there was any suspicion of hypertension.—Journal A. M. A.

MECHANICAL FACTORS IN CONSTIPATION

Dudley Smith, San Francisco, enumerates causes of constipation, which are a tight or hypertrophied sphincter; hemorrhoids; pressure; prolapse; infection of the mucosa; diverticulitis; stricture; proctostasis; lacerated perineum; abnormal abdominal muscles; adhesions; cancer; and Houston valves. He asserts that in the treatment of chronic constipation all of these conditions should be borne in mind and either discovered and corrected or ruled out. They can be discovered only by careful examination—digital, anoscopic, sigmoidoscopic or careful physical and roentgen examination. It is to be regretted that many cases of constipation are daily treated without examination of the rectum and sigmoid. Physicians who would not think of treating sore throat, diseases of the chest, diseases of the female genitals or, in fact, any other region of the body, without careful examination all too frequently treat constipation by diet, laxatives and other methods without any examination to determine the cause of this symptom. It is the duty of physicians to call attention to this fact as often as possible until this situation is remedied. A careful examination of this region will often reveal unsuspected lesions of much more serious import than the complaint for which the patient consults the physician. Many illustrative cases could be mentioned. In Smith's judgment

every patient complaining of constipation or of any rectal trouble should be given the benefit of a careful examination of the lower bowel.

—Journal A. M. A.

FUSION OF KNEE IN PRESENCE OF INFECTION

C. F. Eikenbary, Seattle, asserts that the surgeon is not infrequently confronted with the problem of salvaging a joint which obviously cannot, by any surgical procedure, be made into a useful, movable joint. A tuberculous joint quite generally, and probably invariably, falls into this category. Certainly the tuberculous knee that has gone on to sinus formation has passed the point at which any cure can be expected except through ankylosis in a good position. The economic status of the patient must be considered. The surgical problem is concerned not alone with the question of curing the infected and painful knee but also with that of restoring the injured person to a position of economic independence. Eikenbary reports two cases which illustrate this point. Following the operation it is exceedingly essential that the most rigid degree of immobilization be maintained. This can be done only by means of a most extensive plaster cast, generally reinforced by heavy metal pieces in the neighborhood of the knee in order to admit of occasional dressings. Another point that Eikenbary thinks is most valuable is that dressings should be changed infrequently. It has been his experience that frequent dressings do far more harm than they can ever do good. In some of his cases he does not change the dressings more than once every two or three weeks, and it is rare that the dressings are changed more than once a week.—Journal A. M. A.

ACTION OF SPECIFIC DIURETICS

Experiments were made by George M. Curtis, Chicago, to answer the question of reflex anuria. The simultaneous administration of 100 c.c. of distilled water intraperitoneally at body temperature and the customary dose of the diuretic intramuscularly did not result in any diuresis in rabbits with denervated kidneys. Not only was the ordinary response to the specific diuretic blocked, but even the denervation polyuria was decreased. A secondary diuresis was evident. The blocking of the action of the specific diuretic cannot thus be the result of a reflex nervous inhibition of urinary secretion. Fluid recovered from the peritoneal cavity sixty minutes after the injection of distilled water was nearly isotonic and had a high concentration of electrolytes, with about 23 per cent other than chlorides. The nitrogen concentration of 0.24 per cent indicated albuminous substance approaching 1.5 per cent. When distilled water at body temperature is perfused through the peritoneal cavity of normal rabbits at the rate of 500 c.c. an hour, the blood chloride steadily falls. Other electrolytes are likewise dialyzed away from the blood and tissues. The secretion of urine soon diminishes and an anuria ensues. Injection of the diuretic during the perfusion does not produce any response. There is no secondary diuresis, since the intraperitoneal fluid acquires but a low concentration of electrolytes at any one time. The kidney is not incapacitated by the perfusion, since a marked diuresis results if simultaneously 2.5 per cent sodium chloride is given intravenously at the rate of 1 c.c. a minute. Various theories have been proposed to account for the action of the specific diuretics. Since the work of von

Schroeder they have been thought to act directly on the kidney, and this is now the most generally accepted teaching. The view that they act extrarenally, however, is gaining adherents. These studies teach that the primary action of the specific diuretics is on the tissues. Under their influence permeability changes are initiated, resulting in a rapid passage of electrolytes, principally chlorides, into the blood stream. These act as stimulants to the kidney and initiate the formation of the urine. Opening up a new pathway for the chlorides and other electrolytes, by the simple procedure of intraperitoneal injections, definitely changes the ordinary response. Associated with the action on the tissues is doubtless a similar one on the renal cells.—Journal A. M. A.

WHY PATIENTS CONSULT THE GASTRO-ENTEROLOGIST

George S. Stevenson, New York (1930), asserts that patients through their complaints express hidden motives that must be recognized if rapport and coöperation are to be assured. They have emotional or life problems that result in attitudes seriously influencing a plan of treatment. Often the unexpressed problems of the patient are more serious than the physical problem complained of. It is possible, by taking time and allowing the patient to talk, to reveal hidden motives and emotional problems, and the use of these facts in handling the patient is a big factor in the art of medicine. Psychiatry can probably make its greatest contribution to medical education by making the art of medicine more tangible and by making it available to the medical student in a way that will influence his everyday cases. Such an achievement in medical education, however, must come through pressure exerted on the psychiatrist by physicians in other fields and by avoiding a separation of the patient in bedside teaching into mental and physical.

—Journal A.M.A.

RECENT WORK ON CANCER

Charles F. Geschickter, Baltimore, reviews the work now in progress in European cancer laboratories, on the basis of a recent tour of investigation in Europe of four months' duration which furnishes one of the most reliable means of estimating the present status of cancer research. Work in America and in Europe in the field of malignant disease has become quite diversified but falls readily into the three fields of experimentation as to the cause, the diagnosis and the cure of cancer. There are four lines of investigation in the field of the cause of cancer—irritating agents, tumor filtrates, metabolic studies of the cancer cell, general systemic factors—which all embrace separate theories as to the origin of malignant growths. The metabolic studies of cancer, while most enlightening and encouraging, are at present beset with difficulties and shortcomings. All the metabolic experiments have had the shortcoming of comparing a malignant tumor arising in one type of tissue with normal tissue of a different and unrelated organ. No new form of cancer diagnosis applicable to all forms of malignant disease has been developed in recent years. In borderline cases at present the only standard is the combination of the microscopic observations with the clinical follow-up. This clinical follow-up is of necessity cumbersome and long drawn out. Therefore refinement in the microscopic technic to the point of certainty in tissue diagnosis is most desirable. The chief hope in this direction at present is a reliable differential stain for cancer. The search for a cancer cure is becoming more and

more widespread. Radium treatment has had a distinct rise in popularity both in Europe and in America, but in Regaud's clinic in Paris, where the results have been most carefully checked, this mode of treatment has been found useful only in cancer of epidermal origin and has a close competitor in surgery. Treatment of cancer by intravenous injections of colloidal lead has been abandoned practically everywhere. The quest for a vital dye to serve as a chemotherapeutic agent is being pursued in many European laboratories. The attempt to immunize against cancer is being tried by Lumsden in England and elsewhere in Germany. It is still in the experimental stage. Newer metabolic observations with regard to the respiration of tumor cells have been applied in the experimental treatment of cancer. Warburg of Berlin has tried to suffocate the tumor by an atmosphere deficient in oxygen, and Sokoloff of Prague has tried to exhaust it with overbreathing. Both methods have been confined to local growths in mice. A series of criteria for judging alleged cancer cures is easily formulated, although compliance with its requirements is difficult. Histologic diagnosis, cure of metastatic cases and permanent cures established by follow-up examinations, extending over five year periods, should be applied to all alleged cancer cures. From this point of view immediate cures of local tumors in experimental animals, however intriguing, are false alarms. Serious and extensive clinical trial of any method by workers other than its advocate should await, first, the submission of the sections to substantiate the diagnosis in all cured cases; second, proof that the disease had progressed to dissemination at the time of treatment; and, third, a five year follow-up to show the permanence of the cure.—Journal A.M.A.

SEES GREATEST HOPE IN CANCER HEREDITY STUDIES

The most hopeful thing about cancer has been brought out by Maud Slye's studies of cancer heredity in mice, Dr. H. Gideon Wells of the University of Chicago said in a recent lecture at the Johns Hopkins School of Hygiene and Public Health. This fact is that while a tendency to cancer is hereditary, a tendency to resist it is also hereditary, and the resistance to cancer dominates the susceptibility to it.

Cancer is about the same in animals and in man, and heredity is the same. Therefore, Dr. Wells believes that what we learn about cancer heredity in animals must have some relation to cancer in human beings. In fact, he said after the lecture that he considered the method of animal experimentation and the study the only way to solve this problem.

In most people the tendency to resist cancer is evidently stronger than the tendency to cancer, as only one-tenth of the population dies of cancer, Dr. Wells pointed out, and this bears out Miss Slye's studies on the heredity of mouse cancer. However, Dr. Wells observed that cancer generally does not develop until late in life and cancer mortality might be higher if people did not die from other causes before reaching the age at which cancer usually develops.

In speaking of this, Dr. Wells remarked satirically that the only sure preventive of cancer is an early death. However, the matter of cancer heredity is far from settled, and it is not so simple as it may appear, he concluded.—Science Service.

EINSTEIN THEORY INVADES PSYCHOLOGY

Freud's psychology, which the public has found so useful to explain its yearnings, motives, and shortcomings, is supplanted by something newer. Psychologists have discovered Einstein.

The newest school of psychological thought, the Gestalt theory, is based on the principle of relativity, which Einstein made famous in his explanations of the physical universe, Dr. Paul C. Squires, psychologist, declares in the Scientific Monthly. Like Einstein's communications to the world, the treatises on the Gestalt psychology have been couched in such abstruse language that laymen have not recognized their implications, he states.

Relativity psychology holds that our impressions of the world are in the form of patterns which shift and change as situations change, Dr. Squires explains. Red as we see it, for example, is relative, not absolute and unchanging. If we look at the redness cast on the snow by the rising sun, we consistently underestimate the redness of the snow. Snow is white, our minds insist, and the pattern that the snow scene presents to our minds is definitely controlled by that powerful idea of white snow. The same amount of red color on white paper brings a different pattern into existence and we see red. Our experience is thus like a kaleidoscope in which the pattern is always shifting. Any object in the pattern may have its meaning changed as the pattern shifts, and our attention is always fixed upon an object as it appears in the pattern, never upon the object as an independent bit of reality. The word gestalt may be translated pattern.

Once this idea of relativity is grasped, the student of human relativity can progress to something harder. Gestalt psychologists claim that there is such a thing as "pure motion," that is, movement can be apprehended as separate from the thing bearing the movement. Explaining such human experiences requires intricate experimenting and knowledge of physics and mathematics. The new psychology has had to work out fundamental laws showing the relations between space, time and intensity values necessary to produce illusions of movement, Dr. Squires states. These laws govern purely external conditions. There are also considered to be laws of a higher order which reside within the individual himself.

According to the new theory, "human behavior and physical events are different expressions of purely natural law," the psychologist explains.

—Science Service.

PIONEER EVOLUTIONIST TO HAVE MEMORIAL

Lamarck, the great French scientist of the late eighteenth and early nineteenth century who was Darwin's precursor in the field of evolution, is to have a memorial erected on the site of his birthplace, by a committee of the Société Linneenne du Nord de la France. For nearly a hundred years after his death in 1829, he had no other monument than the house where he was born, in Bazentin, a village of the Somme. This was in the path of some of the heaviest fighting during the war, and was completely demolished. The proposed monument is to be surrounded by a garden in which all the plants which have been named in honor of Lamarck or studied by him during his lifetime will be grown.

—Science Service.

PARROT FEVER INVADES AMERICA

What is probably only the second or third occurrence of psittacosis, or parrot fever, in this country has been reported from Annapolis, Maryland, where three people are seriously ill with this little-known but highly fatal malady. The disease was contracted from a parrot bought three weeks ago. The bird died on Christmas. The germ causing the disease has never been determined, although several organisms have been suggested. The disease has symptoms typical of pneumonia, develops within a week or ten days after exposure, lasts about 15 or 20 days and causes death in nearly half the cases. Outbreaks have been reported in European and South American countries, and two others, one in Boston and one in Hollywood, California, have been reported in the United States besides the present one in Annapolis. There is no indication of the disease being transmitted from man to man, Dr. George McCoy of the U. S. Public Health Service stated, so that probably no danger of an epidemic exists. Usually the outbreaks are limited to the household in which the infected parrot has been. However, a medical textbook advises isolation of the patient as a precautionary measure.—Science Service.

EXPECT BIG DECLINE IN TUBERCULOSIS DEATHS SOON

"The time is not far distant when a new major decline in tuberculosis may again take place," statisticians of the Metropolitan Life Insurance Company have declared. Their earlier prophecy that 1929 would see the lowest tuberculosis death rate ever recorded in the United States will certainly be fulfilled, they found after a review of the latest figures. Reports through the end of November, the latest available, showed a rate of 85.9 per 100,000, which is a decline of 5.7 per cent as compared with the corresponding period of 1928. Tuberculosis will some day rank among the relatively minor causes of death. A death rate of 40

per 100,000 will probably be approached during the next ten years.

"The greatest reduction in the mortality from tuberculosis has taken place in that group of the population where the situation has always been the gravest," the statisticians pointed out, referring to the group of wage earners and their families.

"With the attainment of a death rate of 40 per 100,000 we shall have reached the point where the end of the fight against tuberculosis will surely be in sight," they stated.—Science Service.

FOOD CALORIES ALIKE WORLD OVER

Exacting dietitians and those who carefully gauge the energy values of their food are assured even greater nutritional accuracy than they have enjoyed in the past by the new definition of the calory, the unit of heat energy determined by the group of physicists in London.

In the past the calory was the amount of heat required to raise the temperature of one gram of water one degree Centigrade. The big calory was 1,000 times the size of the calory. Now the big calory is called one eight hundred and sixtieth of a kilowatt-hour.

The trouble with the original calory is that it is not always the same. While the differences are not great enough to be of much concern to the engineer they are of sufficient size to worry the physicist in the laboratory, and even make some difference to the dietitian.

The gram is not always of the same weight. At the seashore it is heavier than it is on the mountain top. And then, a slightly different amount of heat is required to raise the temperature of water from three to four degrees than is needed to increase it from 87 to 88 degrees.

But, now, the definition is in terms of unvarying quantities—force, mass and acceleration—the simple relations that hold constant wherever and whenever applied.—Science Service.

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SINUS THROMBOPHLEBITIS*

D. R. HEETDERKS, M.D.†
GRAND RAPIDS, MICHIGAN

Sinus thrombophlebitis is the most common aural complication in mastoid surgery. Pathologically two processes are recognized. The earlier stage is that of acute sinus phlebitis, which, if uninterrupted, very frequently gives rise to the formation of a thrombus at the site of the lesion. I wish to present four cases in various stages of the disease process.

Case 1. Mrs. N. D., aged 28, was referred with a chief complaint of discharging right ear associated with pain. Three weeks before the patient experienced a severe head cold. After five days the family doctor performed a myringotomy because of earache with partial relief. Some pain continued and she had definite chills for several nights prior to entrance. Temperature was up around 104 at times and she experienced annoying vertigo. Examination showed the facies to be septic. There was redness and edema over the right mastoid region, which was extremely tender. The external canal

was filled with frank pus. There was definite bulging of Shrapnell's membrane as well as the superior canal wall. Kernig's sign was negative, and there was no rigidity of the neck. The temperature was 103.5. Urinalysis was essentially negative, leukocytes numbered 18,000. The roentgenogram showed some breaking down of the cell walls. A diagnosis was made of acute suppurative otitis media with mastoiditis and sinus thrombosis. It was considered advisable to operate immediately. November 8th at time of operation the mastoid was found to be of the diploic type. All cells were filled with infected granulations and bled freely. The sinus plate appeared to be healthy, but when removed the sinus wall was found to be covered with granulations. A small incision in the sinus wall was followed by good bleeding from above and below. The next day the blood culture was positive for streptococcus viridans.

*Read before the section on Ophthalmology and Otolaryngology, 109th Annual Meeting of the Michigan State Medical Society, Jackson, Sept. 17 to 19, 1929.

†Dr. Dewey Ralph Heetderks, Otolaryngologist, attended the University of Michigan at Ann Arbor. Received the degree of A.B. in 1918 and M.D. in 1922. Was interne at Blodgett Memorial Hospital in Grand Rapids, Michigan, from June, 1922 to 1923. Served a Fellowship at the Mayo Clinic for four years in Otolaryngology, plastic surgery of the head, and broncho-esophagocopy. Received degree Master of Science in Otolaryngology in 1927 from University of Minnesota graduate school. Member of American Board of Otolaryngology. Fellow of the American College of Surgeons. Consulting Otolaryngologist at St. Mary's Hospital, Grand Rapids, Mich.

Case 2. L. P., a boy aged 6, entered with chief complaint of swelling in the region of the right mastoid and discharge from the right ear. Three weeks previous he had a severe upper respiratory infection. After a few days the right ear began to ache and canal. The ear drum was bulging with associated drooping of the superior canal wall. There was marked tenderness over the tip and emissary region, less over all the right side of the head. Fundi were negative. Leukocytes numbered 16,000. The roent-

Case 1, Mrs. N. D. aged 28

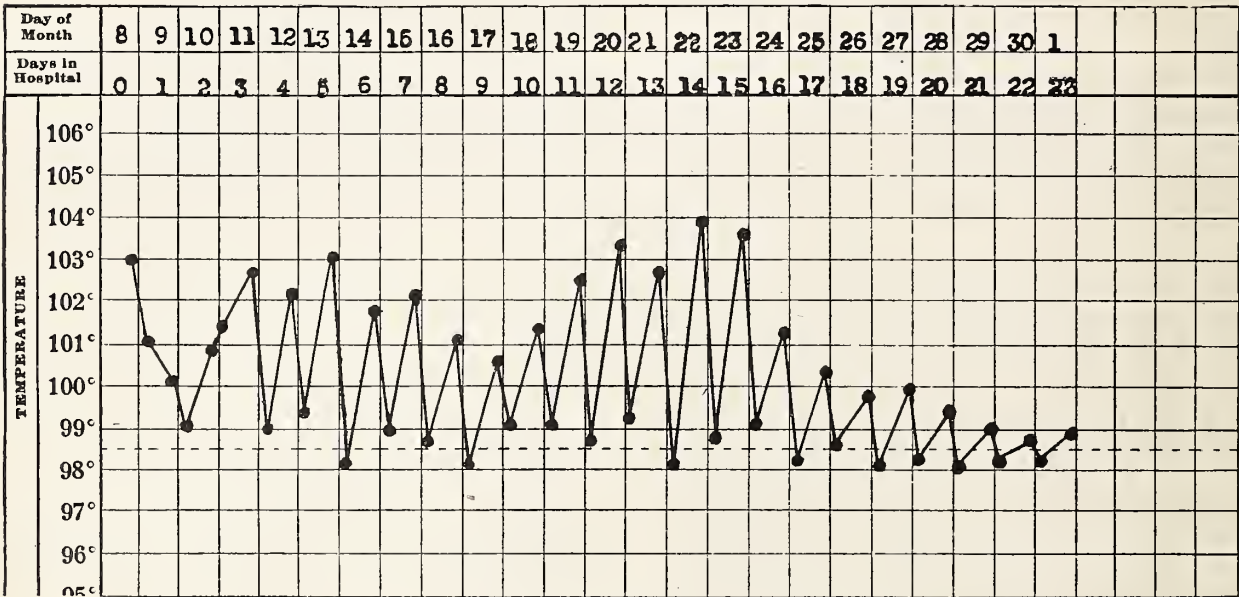


Fig. 1. Case 1. Postoperative course: First day, much improved. Next few days temperature was septic but no chills; leukocytes 21,000. Fifth day, temperature 103 and chills. Exposure of wound showed sinus wall pulsating as though patent. Seventh day, internal jugular ligation and sinus ablation, blood culture then became negative, some reduction in leukocytes, but temperature very septic. General examination showed no other cause for temperature elevation. Fifteenth day: Blood transfusion done by citrate method. Following this there was a rapid convalescence.

Case 2. L. P. a boy age 6

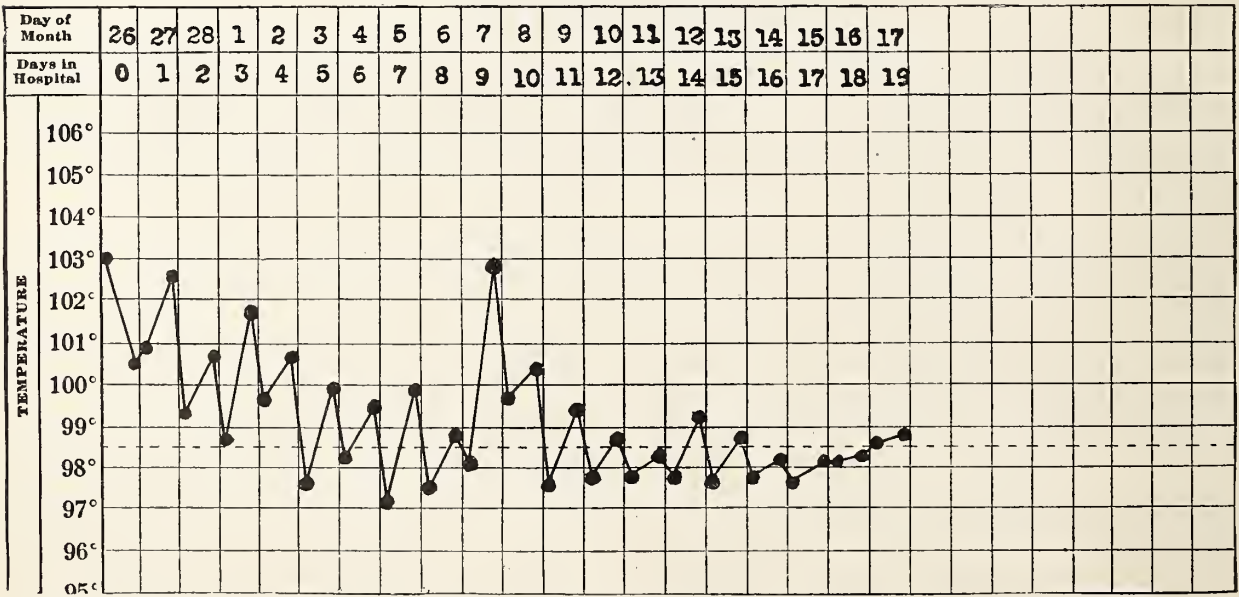


Fig. 2. Case 2. Postoperative course: Condition good after operation. Fourth day, wound clean, sinus bled on removal of middle pack. Repacked. Ninth day, sharp rise in temperature following removal of all packs. Leukocytes 10,500.

the next day ruptured spontaneously. For two days prior to examination the patient had experienced severe pain back of the right ear followed by swelling, increased temperature and chills. Examination revealed profuse purulent discharge in the right genogram showed definite decalcification of part of the sinus plate. A diagnosis was made of acute suppurative otitis media on the right with mastoiditis and sinus phlebitis. February 26th (two days following examination) a complete mastoidectomy was

performed. On uncovering the cortex the mastoid cells were found to be bleeding. The mastoid was of the diploic type. The zygomatic cells were filled with infected granulation tissue. A large amount of pus welled up from below the knee of the sinus knee, until normal dura was revealed. After tamponing under the bone edges, the sinus was incised and a definite mural thrombus encountered. Bleeding from both ends was free. Packs were inserted to ablate the sinus. Jugular ligation was considered,

Case 3, Mrs. P. S. aged 45.

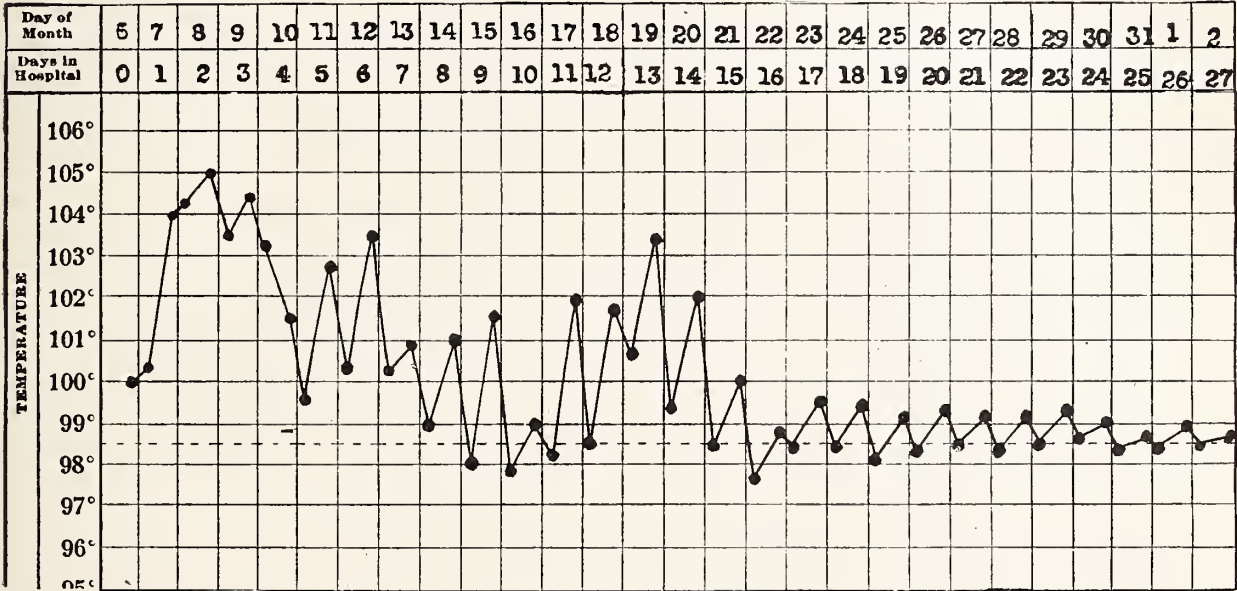


Fig. 3. Case 3. Postoperative course: First and second days, steady rise in temperature. All sutures removed, wound found to be in good condition; white count dropped to 13,800. Sixth day, patient began to feel chilly and drowsy. Seventh day, blood culture showed no growth, leukocytes 14,400. Ninth day, sigmoid sinus uncovered and found gangrenous, uncovered toward torcular, free bleeding encountered. No bleeding from bulbar end; jugular vein ligated above facial. Twelfth day, blood typed and transfusion considered. Fifteenth day, spontaneous perforation of left membrana tympana. From then on there was definite improvement.

Case 4, L. J. a boy age 5

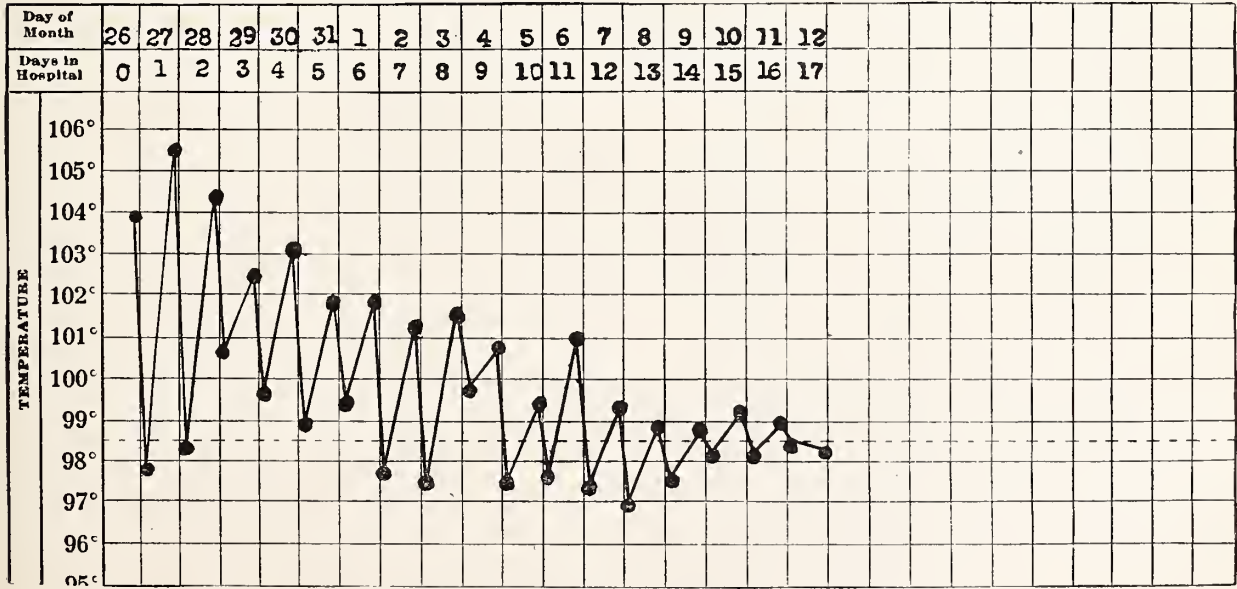


Fig. 4. Case 4. March 26, entered hospital. Transfused same day with 250 c.c. of citrated blood. March 28, operation was performed. Right side found normal. Left lateral sinus thrombosed and free pus in jugular bulb. Sinus ablated. Left internal jugular vein ligated above facial. Temperature gradually returned to normal.

which had been exposed by the disease process. The exposed part of the sinus wall was greyish and thickened by granulations. The sinus was surgically further uncovered toward the bulb and back over the but because of the patient's general good condition it was felt the operation could be delayed to await any further developments.

Case 3. Mrs. P. S., aged 45, was first seen at home

because of earache on the right of eight hours standing. Myringotomy was performed with release of aqueous discharge. The patient was kept under observation and progressed very satisfactorily until three and one-half weeks after the onset. Then she developed fever of 102 and very definite mastoid tenderness, but no chills. There was only a small amount of discharge in the external canal. Erythrocytes numbered 4,200,000, leukocytes 16,300 and 82% polymorphonuclears. A diagnosis was made of acute suppurative otitis media with mastoiditis on the right. Jan. 6 (date of examination) a complete mastoidectomy was done on the affected side. The mastoid was of the pneumatic type. The cells were filled with infected granulation tissue and a small amount of free pus welled up from the region of the tip. The sinus plate was firm and was not uncovered because the pathological process in the mastoid was considered sufficient cause for the symptoms. After the first few days the patient's general condition grew worse. In spite of this the number of leukocytes dropped from 16,300 to 13,800. On the 9th day because of peculiar mental reaction at times, septic appearance, and profuse perspiration at night, the sigmoid sinus was uncovered and found to be gangrenous. Blood culture was negative. After the 17th day there was definite improvement and the patient was dismissed from the hospital February 2nd. Convalescence was protracted. The symptoms gradually disappeared, possibly as a result of canalization of any remaining thrombus.

Case 4. L. J., a boy aged 5, was referred because of discharging ears, discharging mastoid wounds and extreme weakness. In the middle of February the child had measles and five days after the onset of the disease pain developed in both ears. Four days later the left ear began to discharge and the following day the right ear. There was considerable pain in both mastoid areas and a continuous high temperature. After three weeks the child was taken to the hospital and a bilateral mastoid operation performed. Following this there was a daily rise in temperature, at one time as high as 106.4. There were but two chills. Examination at this time, March 24th (i.e. five weeks after onset) showed the boy to be very anemic and emaciated. He had bilateral discharging ears, bilateral open mastoid wounds and enlarged glands in either cervical region, more on the left. Crow's sign was negative. There was slight swelling in the left lateral wall of the pharynx. Further physical examination was negative, and blood count showed only slight change; 3,500,000 erythrocytes, 13,600 leukocytes. Blood culture made at this time contained staphylococci. March 26th, two days after examination, the boy was sent to the hospital and transfused with 250 c.c. of citrated blood with no effect on the temperature, although there was some improvement in the patient's general appearance. A diagnosis was made of sinus phlebitis on the left and possibly on the right. The diagnosis was phlebitis in preference to thrombosis because the patient did not have the usual septic appearance. March 28th operation was performed. The right internal jugular vein and the right lateral sinus were found to be normal. The left lateral sinus was thrombosed and there was free pus in the jugular bulb. The sinus was ablated. The left internal jugular vein was found to be thrombosed and was ligated and divided above the facial vein (which was below the thrombosed area). At operation the blood culture was negative. The boy's temperature gradually returned to normal and remained so. Wounds healed nicely.

Either or both sides might have been involved in this case. It was thought the left side was involved because of the enlargement in the left pharynx and the greater external glandular involvement.

DISCUSSION

Dr. J. M. Robb (Detroit): Dr. Heetderks' paper presents many points of interest. I was gratified to hear him speak of the Schwartze operation as a complete mastoidectomy instead of a simple mastoid operation. Is there such a thing as a simple mastoid? I doubt it. The statement to the patient or relatives that one is going to do a simple mastoid is usually very misleading and extremely difficult to explain when complications arise. Mastoids are serious problems and their complete healing brings a feeling of relief to the experienced surgeon.

I was impressed to hear the doctor depend mostly upon repeated findings to determine sepsis, just as Dr. Parker Heath suggested "dusting off the perimeter and making repeated examinations with a familar test."

The finding of a cord-like mass in the neck has been of no use to me in diagnosis. I suspect it has little value.

Spinal manometric readings have value, but are not always easily accomplished.

I know there are difficulties in diagnosis of sinus thrombosis, although Dr. Heetderks does not seem to have had much in these cases. He must analyze the situation carefully before operating. With me, however thoroughly the case has been investigated, I occasionally discover at operation such conditions as extradural abscess, perisinus abscess, and sinus thrombosis.

In sinus thrombosis, we are dealing with a superimposed infection—the first infection being, perhaps, influenza or scarlet fever; the second infection, mastoid disease; the third, infective thrombophlebitis. Anyone, I believe, will agree that this problem is difficult of analysis.

The pathologist helps us only occasionally because, so far as he is concerned, sepsis means finding bacteria in the blood stream, and, unfortunately, the peripheral veins from which the culture is taken may show none when the blood of the lateral sinus may show plenty, to account for the clinical findings. Clinically, sepsis may mean anything from a lowgrade prolonged process, with almost no symptoms, to a condition with appalling symptoms, and prompt exitus.

Sinus thrombosis is a defensive mechanism on the part of the individual. Nature is throwing out a wall against the spread of infection and it is not until this wall or clot begins to break down and disseminate that the symptoms present.

On the average we determine the most of our diagnosis on the illness of the patient. The chief indication is a swinging temperature, with a rise and fall of two or three degrees which has appeared, usually, rather rapidly, but, at times, most insidiously, and of slow development. Previously, I mentioned sinus thrombosis as a defensive mechanism, in which a barrier has been established across the sinus. I have operated such patients later and found the obliterated sinus. In one old gentleman, who rather late in the healing process developed the symptoms of a localized meningitis, I exposed the temporosphenoidal lobe and found the pathology. Although there had been signs of the characteristic sepsis of sinus thrombosis, the consultant and I agreed that the sinus should be exposed. The investigation showed a completely obliterated sinus of moderately recent pathology, undoubtedly established at the onset of the mastoid infection.

I have eight known cases of sinus thrombosis in eleven hundred mastoid operations.

I am still in doubt as to how to proceed when dealing with a suspicious lateral sinus infection. Shall we tie the jugular vein and open the lateral

sinus afterward, or shall we reverse the procedure? I, ordinarily, proceed by investigating and opening the lateral sinus first.

Another problem that presents is, shall we resect or simply tie off the jugular vein? This is equally difficult to determine. One occasionally has a severe cellulitis of the neck following surgical attack on the jugular vein. In one case, while manipulating the vein, it separated from the jugular bulb. I never had a more perfect healing of the neck wound. The next time I had a case of this severe type, in which the vein was gray, I just pulled the vein loose and had the same result. I do not believe it is good practice if the vein is healthy, but certainly if you have a degenerated vein, resect it, pull it loose from the jugular bulb, and throw it away. Your results in this particular type of case will be much better.

Dr. Robert Sonnenschein (Chicago): I will say this—I do not know of any subject where opinions differ so much as on this, in regard to diagnosis and procedure. So many cases have lateral sinus involvement, with the sinus absent, or the wall covered with granulation; so many cases have so few symptoms, that you are surprised when you reach the sinus. I was called in to see a man 42 years of age. At the time I was consulted he was under the care of a very excellent otolaryngologist and internist. About two or three weeks prior to that time he had had a cold in the head, pain in the ear. In about ten days he was feeling quite well, then he began to have pain in the mastoid and slight temperature and slight tenderness over the antrum region. I believe it is a good idea to have X-rays taken before operation—Dr. Pierce has called attention to the fact that cases with the symptoms of ordinary mastoiditis may develop a full fledged mas-

toid very suddenly. Our patient was well and did not look septic, the white blood count was 10,000. Owing to the fact that he had this recurrence after the first subsidence, we felt we should go in and operate at once, which was done. We found very large cells, the posterior sinus plate was perfectly smooth and hard. We did not disturb it because there were no symptoms, and the headache was gone one hour after operation. We gave him ethylene gas. He was sitting up in bed after the operation. The next day the temperature began to rise—101 and gradually rose to 105 by evening. It is a characteristic often of sinus thrombosis that the patient feels very well. There is no reason for pain, because pain is present only with pressure. This man had a good appetite. The leukocyte count was 12,000. The temperature stayed at 105 to 104 and never dropped to normal in forty-eight hours. We had a blood culture made—you cannot go by a blood culture, and in this case it never was positive. He simply had a temperature. The pulse was very slow, 96, no headache; so we did not assume that there was any intracranial pressure. He looked very well. We thought it might be a parasinusoidal abscess developing, which is not uncommon. He looked worse at the end of seventy-two hours and we decided to operate. I believe in looking at the sinus first—I know some men tie off the jugular but I prefer to see what the sinus looks like first. I made a long incision and got no bleeding, then went up backward, pulled the sinus out and got bleeding, then went down to the jugular bulb and got no bleeding, tied off the jugular and saw a small thrombus right into the lumen of the sinus. The man was dead in thirty-six hours of the most terrific sepsis I ever saw. There had been no real signs of definite sepsis before, as I said.

RECENT OBSERVATIONS IN THE PATHOLOGY OF NASAL SINUSES*

CARL G. WENCKE, M.D.†

BATTLE CREEK, MICHIGAN

To discuss this topic comprehensively would require so much time that it would become tedious, so I will confine by observations to the inflammatory pathology. It may seem presumptuous for me to discuss this subject when we all have listened to, or read, papers by our pathfinders: Hajek, Uffenorde, Skillern. But our experience at the clinic at Battle Creek during the last ten years has changed so radically that I venture to bring it up here hoping that your discussion will help to clarify it.

This process involves primarily the mucous membrane, which is normally composed of a layer of stratified ciliated columnar epithelium on a loose fibrous layer in which are situated the mucous glands, blood vessels and lymph spaces. In its deepest part it becomes compact and contains more spindle-cells and takes the place of the

periosteum. Most inflammatory processes in the nasal sinuses have as their pathological factor some bacterial invasion. How this takes place is still a problem that we discuss in theory, one of the recent being Wright electrolysis of the lipoproteid film covering the epithelial layer. We have always been taught that this bacterial entry brings about an acute congestion. There is first a dilatation of the blood vessels with an increased flow of the blood. This is followed by complete dilatation and stagnation of the blood stream. In this period there

*Read before the section on Otolaryngology, Michigan State Medical Society, Jackson, Michigan, Sept. 17-19, 1929.

†Dr. Carl G. Wencke, M.D., graduated from the University of Illinois in 1914. He has been associated with the Battle Creek Sanitarium ever since, with the exception of the time spent in post-graduate work and in the army; post-graduate work at the University of Illinois, one year at the University of Pennsylvania, and six months at the University of Vienna; two years and five months as captain in the United States Army Medical Corps, associated with the ambulance service; practice limited to ear, nose and throat for the last thirteen years.

is a transudation of blood serum and the migration of the cellular elements. It is the variation in the serous or cellular factors of this process that makes the difference in the pathology observed.

ACUTE EMPYEMA

In the acute suppurative type the cellular elements predominate. There is some exudate of serum but the microscopic picture is one of marked cellular infiltration. There is such an active migration of the polymorphonuclear cells that they work out into the sinus cavity and there appear as pus cells. At first the goblet-cells and mucous glands secrete very little and the content of the cavity is a serous pus. Soon there is a hypersecretion, and the character of the discharge becomes mucopurulent. There is such a marked dilatation of the blood vessels that small interstitial hemorrhages occur. The epithelium is intact and infiltrated with leukocytes.

ACUTE CATARRHAL OR SEROUS INFLAMMATION

In this condition the transudation of serum into the loose areolar tissue of the submucosa predominates, so much so that there is marked thickening of the mucosa to such an extent that in the smaller sinuses they may be filled completely with some of the edematous membrane forced through the ostium, forming a polypus. Again, the interspaces may be dilated to such an extent that mesothelial cysts are formed. I am sure some of you have seen patients who, in the course of a severe acute rhinitis, showed evidence of edematous swelling in the middle meatus which receded as the inflammation subsided. Of course there is cellular infiltration in these cases, but this is overshadowed by the edema. The epithelium is apparently intact throughout. No bacteria in the mucosa have been demonstrated. The secretion in the sinus is mucus or mucus mixed with serum.

Why there should be the two types of reaction to what is apparently the same etiological cause is still an unsettled problem, which we will not attempt to answer.

Most of our work at the clinic has to do with patients who come to us for some chronic ailment, and therefore we see the chronic pathology in the great majority of our patients. Possibly it is for this reason

that some of our findings differ from those of other observers.

CHRONIC SUPPURATIVE INFLAMMATION

Hajek describes three types. We will consider two of them at this time, and the other we will take up specially.

• (1) Papillary or Infiltrating:

In these cases the mucosa is thickened to a marked degree. The surface is distinctly papillary in structure. There is a hyperplasia of the epithelium, which is shown by the multilayered ciliated epithelium. Sometimes a metaplasia is found of the epithelium. There is a very marked cellular infiltration, especially in the subepithelial layers; but it extends to periosteal depths. There is a marked hyperplasia of the blood vessels. There is a lesser degree of hyperplasia in the connective tissue. The above microscopic finding can be seen macroscopically at the time of surgical interference. The mucosa looks rough, sometimes polypoid. On the least trauma it bleeds profusely; on removal it tears easily and is hard to free from the bone. Frequently small plaques of bone have been laid on the original osseous wall due to stimulative irritation of the periosteal layer. I recently had a case in which all of these findings were present, even the lack of fibrous hyperplasia in a case where, to our knowledge, this pathology existed over four years.

(2) Fibrous:

This type is similar to the papillary with the exception that there is greater hyperplasia of the connective tissue cells; possibly because of this, the mucosa is not so thick. The marked cellular infiltration is present. The circulation is increased, but not to such a degree. Again, there is a hyperplasia of the epithelium and also of the osteoblasts of the periosteal layer. In this condition when one attempts to remove the mucosa, while it is loosened with difficulty, it will usually come off in one piece.

In both of these types the surface of the mucosa is covered with a secretion composed of dead leukocytes in mucus, and the cavity is filled with mucopurulent material. Under poor drainage this may break down and a flaky pus is present.

Where this pathology is found, one sinus alone may be involved. The frequency of involvement of the different sinuses, even

to a pansinusitis, we have found about the same as all other observers.

In these two types it is evident that there is a very active reaction locally of the tissues to the bacterial invasion. There is such associated pathology that can be caused by direct extension and irritation of the infection and secretion. The mucosa of the nose over which the secretion runs shows a hyperplasia. There is enlargement of the posterior ends of the inferior turbinates if any of the anterior series are involved, and of the middle turbinate and back of septum if the posterior ones are the source. In the pharynx the lymphoid tissue is usually hypertrophied. In the lower respiratory tract there may be either a superficial irritative bronchitis or the more extensive process of bronchiectasis. But since there is very little absorption from an intact sinus mucosa, the different forms of general pathology are not often seen.

Also, because of this decided reaction to the infection, these cases resolve by some form of treatment which gives an increased drainage and aeration, whether only a puncture and irrigation are necessary, or one has to resort to one of the more radical procedures.

CHRONIC SEROUS INFLAMMATION

Some of the writers call this catarrhal, but the most frequent terminology heard lately is hyperplastic sinusitis. But when you read what is given as the pathology, you readily see that they are all describing the same condition. In this condition the outstanding picture is that of edematous swelling of the mucosa. Hajek does not attempt to classify, but some of the more recent men suggest, as Ball does, that there are four types: (1) Edema; (2) fibrosis; (3) glandular hyperplasia or atrophy; (4) leukocytic reaction. Ryder does not attempt to classify, but states "the elements of this vary."

(1) Edema:

In this the transudate of serum is greatest. This type is often seen with its large soft polypi extending out into the nose. But since the use of iodized oil, we have seen cases of these that had no intranasal evidence of the edema. The X-ray study following iodized oil injection or suffusion suggested unevenly thickened membrane or polyp in one or more of the sinuses, which

was subsequently proven at the time of surgical interference. Again, only a localized filling defect was found, which turned out to be a mesothelial cyst. Microscopic examination shows a marked transudate into the interspaces with a small amount of cellular infiltration which is mostly of the mononuclear cells. There is very little increase in the blood vessels. Macroscopically there is either polypi or general thickening of the mucosa. This usually is removed with very little difficulty, although it tears very easily because of the small amount of connective tissue. There is practically no bleeding on removal.

(2) Fibrous type:

Here there is a hyperplasia of the connective tissue and therefore there is, as a rule, less thickening of the mucosa, but we all have seen cases where there were definite polypi both in and out of the sinus that had a definite connective tissue stroma. Here again with the aid of the iodized oil we have been able to diagnose cases where the ordinary X-ray examination was practically negative, and at the time of surgical interference showed an unevenly thickened membrane of a yellowish color and smooth surface. There are, at times, some small polypi or polypoid elevations. This membrane also can be removed with ease and comes off in one piece. In one instance, while doing an ethmoidectomy, and after enlarging the frontal canal, the membrane was grasped with a forceps and with gentle traction the entire mucosa was removed from a moderately large frontal sinus.

(3) Glandular hyperplasia:

In this there is an increase in the mucus glands and goblet-cells. Therefore, there is a greater thickening of the mucosa near the ostium of the sinus since the greater number of glands are found here which can be seen, especially in the maxillary sinus. There may be retention cysts. While in all the above the secretion in the sinus is mucus, it is especially true of this type. At times it is so gelatinous and tenacious that it is removed with difficulty when irrigation is attempted. In all the above types of serous inflammation there has been practically no activity of the osteoblasts.

(4) Chronic inflammation with leukocytic reaction:

Hajek describes this under suppurative inflammation. Ball makes it one of the

types of serous inflammation. Emerson calls this chronic sinusitis with thickened membrane undergoing degenerative changes. This condition seems to be a mixture of the two main types of inflammation. Which is the original process, or if they develop simultaneously, I cannot say, because the cases we see are usually well advanced. Here there seems to be a mixture of all the types. Microscopically there is hyperplasia, metaplasia, and degeneration of the mucosa. Ryder states "the surface epithelium shows some irregular erosions." The submucosa shows a marked dilatation of the areolar interspaces, with the serous transudate in some places, and in others the connective tissue hyperplasia predominates. In the same sinus both may be present or one or the other may be more evident. There is an increase in the blood vessels. The glandular hyperplasia, as a rule, is not marked. There frequently is found a hyperplasia of the periosteum. There is a marked cellular infiltration; not as much as in the papillary or fibrous suppurative types, but more than in any other of the serous types. But these cells are mostly of the mononuclear types. Ryder has shown tissue necrosis, and Ball has found definite abscess formation with surrounding cellular infiltration and fibrosis.

It is difficult to demonstrate the bacteria. Ryder says "the organisms most commonly found are streptococci, pneumococci, staphylococci, micrococcus catarrhalis and Pfeiffer bacillus." Emerson states that the infection penetrates deeply.

Macroscopically the diseased mucous membrane shows a definite thickening which may be even throughout or there may be polypi. Occasionally we have observed definite ulceration. It has a yellowish pink color in which definite yellow spots appear. Abscesses from fine pinpoint to the size of a pea have been observed. Subperiosteal abscesses have been observed, and at these points there is usually some osteitis shown by the roughened bone. Other places there have been plaques of bone laid on the bony wall. The membrane, as a rule, is not torn very easily. There may be some mucous cysts, but these are rarely observed.

Concerning the frequency with which the different sinuses are involved we are unable to say, as most of our cases are of long

standing, but our study has shown us that we can use the maxillary as the gauge of the involvement of the other sinuses of the anterior series. If we have decided the maxillary needs surgical interference, and it proves we were justified, we always explore the ethmoid region. With the posterior series we either study with the help of the iodized oil or depend upon the nasal pathology. The associated nasal pathology may be only a moderate amount of hyperplasia in the usual places caused by irritation, but usually there are polypi.

As to the general pathology that may result from this condition, our clinicians are beginning to believe that anything that can be caused by a focal infection may find its origin in this type of sinus pathology.

Since in this condition there is a definite invasion of the sinus mucosa, and we find degenerative changes such as abscess formation, this type of sinusitis does not tend to heal or the mucosa to regenerate by the usual methods of drainage and aeration, and only complete removal of the diseased membrane will help these patients locally and generally.

I will close my remarks with a statement and a question. Up to approximately ten years ago the great majority of our chronic sinuses were of the suppurative type, and irrigation and aeration was our prevailing type of therapy; now the tables have turned, and we rarely see the true suppurative type, and we are kept busy with the care of these serous inflammations with leukocytic reaction. Is it because our methods of diagnosis are better, which I do not believe is wholly responsible, or is there a definite change in the pathology of the sinuses?

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PERFORATING INJURIES OF THE EYE BY SMALL STEEL FRAGMENTS*

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My audience may wonder how I should expect to extract anything of particular interest from a subject that has amassed such a voluminous literature and whose every angle has been searched and commented upon.

My answer is that in this state, through the development largely of the automobile and accessory industries not only in the larger cities but in most of the smaller towns, ophthalmologists have had unusual opportunities for observing injuries of the eye by steel fragments and might be expected to have accumulated, in the course of twenty-five years, experiences in caring for these injuries that would be worth relating.

Furthermore, inasmuch as I am limiting my subject to injuries of the eyes by small steel fragments, and chiefly to damage affecting the crystalline lens, and since the case-records at my disposal are sufficiently numerous to fairly well outline the various themes that I shall present, I am hopeful that my paper will have some novel interest.

The Damage Done to the Eye in Foreign Body Injuries is Directly Proportional to the Size of the Foreign Body.

This is a general rule with exceptions. Accidents from large foreign bodies usually result from forces of considerable violence. As examples I may mention the breaking of a high-speed drill, the faulty action of a punch press, and frayed edges of punches flying from the blows of a hammer or sledge.

Injuries by large foreign bodies shatter the eyeball. Large rents of the cornea or sclera result, with extensive loss of vitreous. The lens is expelled or ruptured. The globe collapses, or, if it retains its shape, is filled with blood.

Perforating injuries of the cornea by foreign bodies of moderate size are characterized by irregular corneal wounds and emptying of the anterior chamber. The iris is prolapsed or becomes attached to the corneal wound. Tearing of the iris or ciliary body results in bleeding into the an-

terior chamber or vitreous. If the lens is injured, the capsule wound gapes and lens matter is soon extruded into the anterior chamber.

The most frequent cause of perforating injuries by small steel fragments is the workman striking a piece of hardened steel with a hammer. I could relate numerous incidents of superintendents, foremen and skilled mechanics regretting too late the gentle tap which in a moment of carelessness they gave to hardened steel. The use of lead and brass hammers has perhaps diminished the occurrence of such accidents, but I have seen perforating injuries follow even their use. The history of such an accident is sufficient to make the ophthalmologist undertake a most searching examination of the eye and he must indeed be very sure of his ground if he dispenses with an X-ray examination.

In injuries by small foreign bodies the corneal wound is smooth and may be so inconspicuous as to be missed easily on inspection. The anterior chamber is not evacuated. The iris may exhibit a punched-out hole or a notch in the pupillary margin. If the lens is injured the wound in the anterior capsule shows a tendency to close promptly and the lenticular opacity resulting remains partial, or, if it progresses, it does so slowly. The vitreous is often clear and the foreign body may frequently be seen in the posterior part of the globe.

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INJURIES BY SMALL FOREIGN BODIES PERFORATING THE CORNEA NEAR THE LIMBUS

In going over my case records I have found ten in which a small steel fragment perforated the peripheral portion of the cornea and a review of these records seems to warrant the conclusion that where small

foreign bodies perforate the cornea near the limbus they pass through the zonular region and leave the lens uninjured. In each of the ten cases there was a punched-out hole or slit in the iris back of the corneal wound. The pupil was round in most instances, but twice it was pear-shaped, as it was drawn slightly toward the corneal wound. While there was usually some blood in the vitreous, this did not prevent the steel fragment from being seen in four instances. Twice the foreign body was located behind the ciliary body where one would not expect it to be detected with the ophthalmoscope. In only one of the ten patients was the lens injured and in this instance a limited flame-shaped opacity developed near the equator. The steel fragments were removed by the posterior route. Following the extraction eight of the ten patients retained useful industrial vision. One had a fragment of steel in the retina and detachment eventually followed. One had an old injury with a long retained foreign body, siderosis and degenerative changes.

My records indicate that the eye does not so easily escape serious damage when foreign bodies of moderate size penetrate through this region. Evidently the zonular space between ciliary body and lens is not of sufficient width to prevent injury of these structures. Severe hemorrhage and cataract frequently result. As the wound approaches the pupillary zone of the cornea the frequency with which the lens is injured increases. However, I have two records showing the oblique penetration of foreign bodies, that cut through the iris near the pupillary margin and yet entirely missed the lens.

REMOVAL OF SMALL STEEL FRAGMENTS FROM THE LENS WITHOUT CATARACT FORMATION

I have had three patients each with a steel fragment in the lens and in each instance after the extraction of the fragment the lens remained clear except for a scar of the anterior capsule. One such case occurred in 1915, the other two within a month of each other in 1926. These three cases occurred among approximately 250 perforating injuries of the eye with retention of a foreign body. In all three instances a small foreign body perforated the pupillary zone of the cornea, the anterior capsule and lodged in

the lens substance. A brief history of one case will be descriptive of the other two.

G. O., age 45, tool maker, was striking a hardened bushing with a hammer when something struck his right eye. The accident happened on February 26, 1926. The eye bothered him so little that he did not report the accident until after four days, when he noticed slight blurring of vision. I found a small crescent-shaped wound of the cornea in the pupillary area downwards and nasalwards from the center of the cornea. Almost directly back of the corneal wound there was a small wound of the anterior capsule of the lens and a small foreign body with metallic glance lay in the central portion of the lens. The lens substance surrounding the foreign body was clear except that the latter was partially covered a thing grey film. The eye was slightly injected.

Under cocaine anesthesia a fragment of steel was readily drawn by a magnet through the capsular wound into the anterior chamber. It was allowed to remain there for twenty-four hours, when it was removed through a tangential incision of the cornea. The delay in removing the foreign body from the anterior chamber was permitted in order that the capsular wound might close under the same conditions as when the steel entered the lens, namely, with a full anterior chamber. Healing was uneventful and the patient returned to work in five days on his own initiative. The vision one year later was 20/20 in each eye. Except for the small capsular wound the lens appeared clear with the plus 20 lens of the ophthalmoscope. The patient was again examined recently, that is three years after the accident, and with the slit-lamp I could detect no opacity of the lens substance. There was a small capsular opacity at the site of perforation.

Normal vision resulted for each of the other patients. The clear lens in each patient is undoubtedly the result of the prompt closure of the wound of the anterior capsule and this was favored by the small size of the foreign body. The early removal of the foreign body after the accident was also a factor in the successful results obtained. The small fragments of steel removed from the last two patients were carefully weighed at the laboratory of Parke-Davis & Co. and the weights were .4 mg. and .47 mg. Foreign bodies such as these, less than a half a milligram in weight, are minute in size.

A fourth patient with a foreign body in a clear lens was not so fortunate as the three just mentioned.

G. C., age 38, was examined the year following an injury to the right eye. There was a small scar of the pupillary zone, a scar of the anterior capsule and a metallic fragment, centrally located, in an otherwise clear lens. As the steel had been there so long and vision was still good, no attempt to remove the steel was made at that time. One month later when the patient was again seen I was surprised to find that the foreign body had moved forward to the scar in the lens capsule and that the lens was becoming opaque. Two months later the chamber was shallow, there was a small amount of lens matter in the anterior chamber, the lens was opaque, tension was plus 1 and the eye painful. Under atropine the tension returned to normal. The cataract and steel together were removed six

months later. The small fragment of steel, which had been in the lens about eighteen months, was expelled with the lens. The fragment was not attracted by a magnet until the rust coating was removed by rubbing the fragment between my fingers. A small nucleus remained, which was quickly attracted by the magnet.

I am unable to explain the change in position of the steel fragment from the central part of the lens to a point just beneath the scar in the anterior capsule. The patient worked in a large automobile plant; possibly his eye may have come into a magnetic field strong enough to have moved the foreign body.

DIFFICULTY IN REMOVING STEEL FRAGMENTS FROM THE LENS AFTER THE CAPSULAR WOUND IS HEALED

Fragments of iron or steel, embedded in the lens substance, are drawn readily by the magnet to the anterior lens capsule, but this structure is an obstacle to their passage into the anterior chamber. If the wound in the anterior lens capsule is not too tightly closed the foreign body may be drawn through it. Tight closure of the wound takes place by proliferation of the cells of the capsular epithelium and this process requires some time. In two of the cases cited, where the fragment of metal was removed from the lens without a permanent opacity resulting, the foreign body was drawn through the capsular wound without difficulty four days and nine days respectively after the date of accident. The following brief reports indicate the difficulty encountered at the anterior lens capsule and describe attempts to overcome it.

W. D., age 25, injured the right eye February 2, 1927. He was first examined on March 12, 1927, that is, after an interval of 5-6 weeks, and a small fragment of steel was seen in the lens. In the lens there was an opaque path to the foreign body. A magnet was applied to the cornea and the fragment brought to the scar of the lens capsule, but it could not be drawn through. The lens slowly became opaque and six weeks later both lens and foreign body were removed at the same time.

H. B., age 35, was examined November 14, 1926. Six weeks earlier, he had been struck in the right eye by a piece of steel. He had a lamellar cataract in each eye, apparently of congenital origin. In the posterior portion of the right lens, possibly projecting into the vitreous, there was a small metallic fragment. A posterior cortical opacity appeared to be superimposed on the lamellar cataract in this right eye. Vision of the right eye was 10/200-20/200. Vision of the left eye 20/50. A giant magnet brought the foreign body to the anterior lens capsule but it could not be pulled through. It moved so freely in the lens cortex just under the capsule that it simulated a foreign body in the anterior chamber. In fact, an opening was made in the cornea preparatory to removing the fragment from

the anterior chamber before it was discovered that the fragment had not come through the lens capsule. A cystotome was introduced into the anterior chamber and a small puncture or incision made in the capsule over the foreign body, a procedure that has been suggested in such cases by Elschning.^{1, 2} It was then readily removed with the magnet. There appeared to be no further increase in the opacity nor decrease in visual acuity, which was, however, as stated, slightly less than 20/200.

C. W., vision began to fail in the right eye about July 20, 1924. The patient recalled no injury. Examination on August 4, 1924, revealed a small piece of steel in the posterior cortex of the right lens. There was considerable opacification of the lens with vision limited to seeing large objects. There was a mild iritis. Since the fragment of steel in several attempts could not be drawn through the lens capsule, this was pierced with a knife needle. The steel was then readily removed but the lens became gradually opaque; lens matter was extruded into the anterior chamber and the lens was resorbed.

R. B., age 44, was injured July 17, 1928, when a steel splinter struck the right eye. The patient was not seen by me until three weeks later, as he was treated in the first-aid department of his plant until he noticed that vision was failing. There was a scar of the anterior capsule with extension of the opacity backward a short distance into the anterior cortex. The nucleus was clear and contained a steel fragment. There was a posterior cortical opacity, red reflex partial. Visual acuity, 10/200. The patient was observed for one week and as the opacity was not increasing an attempt was made to remove the fragment. It could not, however, be drawn through the wound of the capsule. During the maneuver a sharp end of the fragment engaged the capsule at a point adjacent to the capsular wound and by repeatedly making and breaking the current, I was able to get the fragment to perforate the capsule. A second scar of the capsule resulted. The fragment was a spicule of steel about 1 by 2 mm. There was no immediate increase in the opacity and five weeks after the operation vision had increased from 10/200 to 20/200. Three weeks later a definite increase in the opacity was noted. The anterior cortex had a silky sheen throughout and the posterior cortex was more opaque. Vision was 4/200. His condition was the same when last examined about two months ago.

O. L., age 34, was injured in the right eye by a flying piece of steel, on April 19, 1929. A serious injury was not recognized at the first-aid station in his plant until after several weeks, when vision began to fail. On examination, I found a scar in the pupillary zone of the cornea, and a small fragment of steel in the lens cortex. Cataract formation was advanced.

An attempt was made to draw the steel through the lens capsule but this was not successful. The foreign body appeared to have no sharp edge and it could not be made to cut through the capsule, by making and breaking the current. After repeated trials, no further procedure at the time was adopted. Some two or three weeks later, as the eye was red and irritated, another attempt was made to pull the steel through the capsule, and this time it came through without difficulty.

From the above experiences, I draw the following conclusions: If a fragment of steel lies in the lens and the opacification is not so advanced but what there is useful vision, an attempt should be made to remove the fragment as early as possible, for event-

ually through siderosis complete opacification will probably result. A strong magnet should be used when the attempt is made to draw out the steel through the wound or scar of the anterior capsule, or through the intact capsule. Repeated efforts should be made, if there is difficulty in securing the foreign body. As a final resort, the procedure recommended by Elschmig, of incising the anterior capsule, is worth while.

MAY A SMALL FOREIGN BODY OF STEEL
UNDERGO COMPLETE RUSTING IN THE
EYE-BALL AND THROUGH RESORP-
TION OF THE RUST EVENTU-
ALLY DISAPPEAR?

This question is raised by Wagenmann in his work on "Injuries of the Eye."³ It is of some practical importance for occasionally when clinical evidence points to a small foreign body of steel having been in the eye-ball for some time and the X-ray examination fails to show the presence of a foreign body, it has been assumed that complete rusting has occurred and the fragment resorbed.

The assumption is not justified by the negative X-ray examination alone, for not infrequently the roentgenologist fails to pick up the shadow of a very small fragment on the X-ray plate, due to its not standing out sharply from the shadows of neighboring bony structures.

Wagenmann does not give a definite answer to the proposed question. He gives several instances in which it was assumed that complete rusting had occurred, namely case-reports by Cramer, Franke, Casali, Liebermann, Gilbert and Pihl, but cites the opinion of Hirschberg, which I translate as follows: "That an iron fragment of only 5 or 10 mg. weight through rusting and solution of the rust can disappear completely, I have not yet observed, although in many cases the rusting of the entire iris shows clearly that the iron salts can be widely distributed. On the contrary I have removed fragments of iron from the eye which have doubtless been there 10, 15 or 30 years, with the magnet. In the course of many years the fragment can become so soft that any other method of removal than with the magnet, as for example with the hook or forceps, appears quite impossible. In the majority of cases the splinter remains solid, the rust hull apparently protecting it against rusting of the nucleus."

While it is my own opinion that small fragments of steel in the eye may undergo complete rusting, it is probable that this only occurs with very small particles, in fact smaller than 5 or 10 mg., the weight mentioned by Hirschberg.

In addition to the case reports cited by Wagenmann, I will add a report by H. S. Gradle,⁴ who assumed the complete rusting of a fragment of steel.

The following are two brief personal case reports bearing on this question.

H. B., male, age 28, came to see me August 8, 1917, on account of redness and soreness of the left eye. He gave a history of having been struck in this eye eight years previously, supposedly by a piece of emery. Three years later he first noticed a cloud in front of this eye and a change in the color of the eye from blue to brown. Consulting an eye specialist at this time he was told that there was possibly a piece of metal in his eye and that he should have an X-ray examination. He did not follow this advice. The cloud in front of the eye became darker and darker but the eye had not pained him or been inflamed, until about two weeks before he came to me.

On examination I found a small scar of the cornea situated about an eighth of an inch from the limbus at the ten o'clock position. In the ciliary part of the iris back of the corneal scar there was a V-shaped, sharply-cut defect such as is made by a foreign body. The anterior chamber was deep; the iris had a deep brownish hue and was markedly tremulous. The lens was shrunken and opaque. Vision: light perception at three feet, projection faulty. The tension was lowered.

At the bottom of the anterior chamber there was a small quadrilateral shaped foreign body, dark in color, which simulated a piece of iron or steel. It was extremely buoyant and bounced lightly about in the chamber with every motion of the eye.

To remove it I incised the cornea below at the limbus. My incision was slightly to the side of the median plane and I applied my magnet to the incision and its tip between the lips of the same in an endeavor to remove the fragment. It gave, however, no evidence of being attracted by the magnet. I therefore enlarged my corneal incision with a pair of scissors so that part of my incision lay directly under the fragment. Immediately there was an escape of aqueous and with it what appeared to be fluid vitreous and the fragment floated through the wound upon the conjunctival surface of the eye-ball. Just as I touched it with a small forceps, to my surprise it appeared to have form without substance and broke up into numerous small flocculent particles, none attracted by a magnet.

It would appear that in this case a piece of iron or steel after lying in the eye for eight years had almost completely disintegrated. The siderosis establishes the fact that the fragment was of iron or steel. I should say that all of the iron must have been oxidized as the magnet had no influence upon it. Had a longer time elapsed it is possible that the fragment might have broken down in the anterior chamber and complete disintegration and disappearance of a fragment occurred.

E. S., age 24, was examined in 1918 and was thought to have a mere abrasion of the cornea. The lens appeared clear, the injury of slight significance. A year later he came in to see me with a well developed cataract. He recited the accident of the

year before, of having something fly into his eye when striking a piece of hardened steel with a hammer. Vision had been failing gradually for the last three months. I realized that I had probably missed a perforating injury with a steel fragment in the lens. When the pupil was dilated a dark sharply outlined mass in the lens came into view, likewise a scar of the anterior capsule.

The lens was removed by linear extraction. The foreign body was not found, as it appeared to have undergone complete rusting and resorption. Small dark grains in the lens matter, chemically indifferent, when examined under the microscope were assumed to be particles of carbon. The lens substance when acidulated gave a prompt iron-reaction.

MINIMAL DAMAGE BY SMALL FOREIGN BODIES COMPLETELY TRAVERSING THE LENS

I have some fourteen case records of injuries by a small piece of steel perforating the lens, that is, entering through the anterior capsule, traversing the lens substance and making an exit through the posterior capsule. As a group there is a tendency for the opacification of the lens to be limited to an opacity of the anterior capsule at the point of entrance, and to an opacity of the posterior capsule surrounding the point of emergence.

I shall briefly recite the history of seven out of the fifteen injuries, the seven patients recovering from the injury with useful industrial vision in the damaged eye.

W. F., age 39, was struck in the left eye in February, 1916, by a piece of high-speed steel. As the eye did not bother him much, he did not report the accident to his employer for three weeks, when the persistent redness and slight blurring of vision began to worry him.

Examination of the eye revealed a small linear scar just below the pupillary area of the cornea, a punched-out hole in the iris back of the scar and a punctate scar of the anterior capsule of the lens adjacent to the lower margin of the pupil. The pupil was round and the iris was not adherent to the scar of the capsule. In a profile it could be seen that the anterior capsular scar extended slightly backward into the anterior cortex. Except for this punctate scar the anterior cortex was clear, also the entire nucleus of the lens. In the upper temporal quadrant of the extreme posterior cortex or in the posterior capsule itself there was a thin disc-shaped greyish opacity near the middle of which was a dark punched-out hole which seemed quite clearly to mark the exit of a foreign body through the posterior capsule. The rest of the posterior cortex was clear.

The visual acuity of the eye was 20/50. An X-ray examination showed a small fragment of steel in the vitreous which was removed without difficulty through the sclera. I have no record of the size or weight of the foreign body but I recall that it was very small. This is also indicated by the size of the hole in the iris, which still persists.

This patient has been seen from time to time since 1916. He was last examined in January, 1929, that is 13 years after the accident. The eye gives him no trouble. With a plus 1.00 sphere combined with a plus .50 cylinder axis 90, visual acuity is 20/20. There has been no change in the opacifica-

tion of the lens. The opacity of the anterior capsule is still punctate, that of the posterior capsule broad, oval, fairly well outlined—appearing web-like when viewed with the ophthalmoscope. This posterior opacity is above and out from the visual axis through the lens, which accounts for the good vision. The rest of the lens is clear.

A. V., age 32, received an injury of the right eye March 30, 1926. I examined him on the following day. There was a linear wound of the cornea in the pupillary zone, $1\frac{1}{2}$ mm. in length, and behind this in the anterior capsule a corresponding wound. The latter had apparently closed for there was no opacity of the anterior cortex. The nuclear region was also clear. A small sharply punched-out hole could be distinctly made out in the posterior capsule under oblique illumination, and surrounding this opening there was a thin greyish opacity like a halo. Opacity and opening were mostly temporalward from the visual axis and were in the same curved surface. Examined through the plus 20 lens of my ophthalmoscope the opacity took the form of an irregular network of lines with the opening distinguishable but less sharply outlined. A fragment of steel, well back in the vitreous, less than 1 mg. in weight, was removed without difficulty by the posterior route. The posterior opacity was observed from day to day. It decreased in size considerably, in a two-weeks period, but a small network of fewer lines remained in which the opening was less sharply marked than at first. Vision on discharge was 20/40. The patient was seen several times during a six months period. Subsequent claim has never been made for visual loss.

J. P. The right eye was injured November 21, 1923. A few days later I examined him and found a small central scar of the cornea, a scar of the anterior lens capsule and a disc-shaped posterior cortical opacity. X-ray examination showed a small metallic fragment in the vitreous which was removed posteriorly with a magnet. The opacity did not increase and three months after the injury was received visual acuity was 20/50. Recent examination of the claim file indicates that no claim for loss of useful vision has been made.

A. J. was injured in the left eye November 14, 1925. He was first examined on November 17, 1925. There was a small wound of the cornea in the pupillary zone, a wound of the anterior lens capsule and a posterior cortical opacity in the upper nasal quadrant. A fragment of steel, 12 mm. back, 4 mm. above and 4 mm. to the nasal side, was removed from the vitreous. The opacity did not progress after discharge. Visual acuity was 20/50. There was no subsequent claim for loss of useful vision.

A similar injury was that of L. S., on March 28, 1924. In my record the posterior cortical opacity is outlined as star-shaped and well above the visual axis. Vision was 20/40. I have no subsequent record of vision in this patient.

H. G. was injured September 7, 1926. I removed a fragment of steel from the vitreous. There was a small central linear wound of the cornea, a wound of the anterior lens capsule, two faint linear opacities in the anterior cortex and a posterior central opacity with a punched-out opening in the posterior capsule. Eventually vision with a plus 2.50 sphere combined with a plus .50 cylinder axis 90, was 20/40.

S. B. was examined November 6, 1926. He gave a history of an injury to his left eye in March of that year and stated an X-ray taken at the plant hospital was negative for the presence of a foreign body. There was, however, a central scar of the cornea, a scar of the anterior lens capsule and a linear path of opacity through the lens to the posterior capsule in the upper nasal quadrant. It appeared probable that the nucleus of the lens was

not in the path of the foreign body. There was an indistinct scarred-over opening in the posterior capsule. Vision was 20/50. A check-up X-ray was negative, but just back of the posterior capsular opacity there was an indistinct opaque area without definite metallic lustre that may have been a minute foreign body. The patient's eye had not changed when examined one year later.

Of the seven patients in this group of fourteen who lost useful vision, all presented at first the opacities of the anterior and posterior cataract. In three patients the lens slowly became more opaque. One had vitreous infection, and in three the posterior cortical cataract was dense enough from the beginning and directly in the visual axis, so that only large objects could be seen.

The conclusion which I have arrived at from observation of this group of fourteen patients may be briefly stated as follows:

A small foreign body frequently may pass entirely through the lens and yet the patient retain useful industrial vision. This results from a limited opacification of the lens in the form of a punctuate opacity at the point of entrance in the anterior capsule, and a disc-shaped opacity of the posterior lens capsule at the point of exit.

DISCUSSION

Dr. John R. Rogers (Grand Rapids): Dr. Begle has covered this subject to such a thorough extent that my discussion will have to be very brief. A few things have come to my mind, which I had not seen before. We have all seen cases of foreign body in the lens. I have a patient now who has a small opacity in the lens, due to a piece of metal, which did not produce a cataract, and which is getting on well apparently for the past five or six years. One point Dr. Begle brought out was that of leaving a foreign body in the anterior chamber until the capsule had time to close, before drawing it out with the magnet. Also, the removal of foreign bodies through the posterior segment, which in his hands, I think, shows a higher percentage of success than in mine. He has certainly had very good results. About 50 per cent of my cases through the poste-

rior route have lost vision by proliferative retinitis followed by detached retina. I did not hear him mention the method of localization, whether a Sweet localizer or other method of determining the location. My experience in wounds of the posterior segment of the eye has been rather unfortunate, where I expect to get a good result. A young man working in a factory had a slight wound of the sclera above the equator of the eye, posterior to the ciliary body through which a small bit of vitreous protruded. The wound was apparently clean. I covered the wound with conjunctiva and took a stitch through that, and the eye appeared to be in good shape. After a few days I began to see a sort of cloud projecting into the vitreous attached to the wound, and swerving into the vitreous. This kept on increasing. It seemed to subside and the eye remained quiet. The man left town and I did not see him again, and a doctor in the northern part of the state wrote me that the patient had lost vision entirely, and he found on examination that there was complete retinal detachment.

Dr. Beil Bentley (Detroit): In Vienna they have a very large percentage of loss of eyes, not following operation but following penetrating injuries. The reason is the unhygienic conditions of employment. I have found the same thing in factories where working conditions are clean; you will have a smaller percentage of infections, and in other factories you will have a very large percentage. The injection of all cases with bacteria or milk injections gives good results. It is used as a preventive in all cases as soon as they come in with a penetrating wound.

Dr. Howell L. Begle (Detroit) (closing): Dr. Rogers asked about the method of localization. I have not done that myself. All my cases go to another man for localization. The Sweet method is very satisfactory except in cases of very minute foreign bodies which may be missed by the most expert retinoscopy.

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THE ESSENTIALS OF HEARING TESTS*

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It is of course impossible in one-half hour to cover the subject of functional testing of hearing. We will, however, touch upon the principal facts of this subject. The purpose of the hearing tests is to determine whether a defect of hearing is present, the degree of the impairment and the location of the lesion; that is to say whether the conduction apparatus consisting of external ear, middle ear and eustachian tube, is involved, or whether the impairment is of the perception apparatus consisting of the inner ear and auditory nerve. It is possible to get a rough estimate of the patient's ability to hear by the general attitude, the attempt at lip reading, the placing of the hand behind the ear, (the hand acting as a collector of sound waves and as a resonator) and the difference in the loudness of the voice. In conduction apparatus impairment, bone conduction is increased, so the voice sounds very loud to himself and for fear of offending, he speaks very low. On the other hand, when bone conduction is diminished, as it is in perception apparatus involvement, the voice appears very low to the patient, and in order to make himself easily understood, he is inclined to speak very loud. The pocket watch, the acoumeter and the voice are used in making the tests. The watch and acoumeter produce noises and are not very dependable for accurate testing.

The voice contains both noises and tones, and while it is not possible to standardize it definitely, if care is used it is most valuable for determining in a practical way the individual's hearing efficiency. One should endeavor to use the same intensity each time by employing the residual air, with the patient standing at the farther end of the room, with no part of the body touching the wall, the opposite ear occluded with the moistened finger, and the eyes closed or averted from the speaker. The examiner should approach the patient from a distance, noting at which point both low and high pitched sounds are heard. In English the numerals are low pitched except sixes and

sevens. The tuning forks are most valuable for testing, as they produce pure tones and can be had in pitches ranging from C-2 (16 double vibrations) up to c-5 (4096 double vibrations).

Certain points should be mentioned with reference to the physics and the action of forks. Tuning forks consist of prongs and a stem. The best forks are made of one piece of metal, should vibrate for a considerable length of time, ought to be as free as possible from overtones, and preferably made of rustless metal. The prongs of tuning forks vibrate transversely with wide excursions, but little intensity. The stem of the fork at the same time is moving in a longitudinal direction, with small excursions but great intensity. When sounding bodies such as strings are excited we get not only the fundamental or actual tone of the string but also certain overtones or harmonics. Usually the first harmonic is the octave of the fundamental, with twice the number of vibrations per second; the next harmonic is the fifth above that, and the third overtone is the second octave above the fundamental. When tuning forks are struck, overtones are also heard, the first of which usually has a loud, shrill tone, with a vibration frequency five or six times that of the fundamental; these overtones are very confusing, and in order to eliminate them it is advisable to place metal weights on the lowest pitched forks. This, however, adds greatly to the weight of the fork and also lessens the period of vibration. On some of the medium pitched forks, instead of using weights, pieces of rubber tubing may be applied to the ends of the prongs to serve the purpose of eliminating overtones without adding to the weight of the fork, or to any appreciable degree shortening the period of vibration.

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So far as the matter of striking the fork is concerned, the general rule holds true that the lower the pitch of the fork, the softer should be the object used for striking it. The lowest forks are usually activated by allowing them to strike a soft object like the hypothenar eminence of the hand or the thigh. The medium pitched ones may be struck with a soft object such as a rubber covered pleximeter, and the highest ones are usually activated with a metal hammer. A definite technic should be developed by each otologist so that the results of examination are uniform and therefore comparable. When testing air conduction the outer or broad surface of the prongs, which usually gives the greatest intensity of sound, should be held close to and parallel with the ear, carefully avoiding contact with the auricle or vibrissæ. For bone conduction the stem of the fork is usually placed upon the middle line of the vertex, or over the mastoid region. The former method is used in the Weber and Schwabach tests, and the latter in the Rinne test. In the Sonnenschein-Minton modification, the stem of the fork is used for both air and bone conduction. With this procedure we get the same result as when the stem is used for bone and the prongs for air conduction, and thus the theoretical objections to the Rinne test are overcome.

The principal tests are the Weber, Schwabach and Rinne. The Weber is used for determining whether lateralization is present, by placing the fork in the median line of the vertex. In normal individuals there is no lateralization of sound. In middle ear or conduction apparatus impairment, lateralization is usually to the worse ear; with inner ear lesions it is usually to the better ear. There are many exceptions to this rule and thus the Weber is the least reliable of the major tuning fork tests, and is of value only when it agrees with and confirms the other tests. If, however, with the Weber lateralized to the worse side in a middle ear infection, there is suddenly a change in lateralization to the better hearing ear, it usually means an extension of the infection to the inner ear (labyrinthitis) of the affected side, so that the Weber then gives most important information.

Both for the Weber and Schwabach test, a medium pitched, rather heavy fork is used. One of the most popular is the Bezold un-

weighted (108 d.v.) fork. However, the weighted c-1, known as d sharp (dis) (154 d.v.), or the c-1 (256 d.v.) may be used. Of the magnesium alloy forks, c (128 d.v.) serves very well. These forks may be excited by allowing them to drop from a perpendicular position to a horizontal one, striking the knee or thigh, thus giving a uniform excitation to the fork. The stem is then placed on the median line of the vertex and the patient asked whether he hears the tone louder in one ear than the other or whether it is heard louder "in the head." This constitutes the Weber test.

The Schwabach test is carried out in the same manner, and the duration of the individual's hearing by bone is determined. In order to avoid the "fatigue" symptom, after a certain length of time, the fork is lifted from the head, then replaced and the patient asked if he again hears the tone. The procedure is repeated until the sound is no longer heard after the fork is returned to the vertex. The examiner then sets the fork upon his own head to see whether the patient's bone conduction is shorter or longer than his own, in order to learn whether the patient is normal or otherwise. I have always felt that it is better to have an objective control, obtained by testing a large number of individuals with certain forks to find the average duration of bone conduction at different ages, and then comparing this figure with that obtained from the patient. The Schwabach test determines the bone conduction in the individual compared with a normal living or an objective standard. A slight diminution or a slight increase in bone conduction is of no significance, but a markedly increased bone conduction usually means conduction apparatus involvement; and a decidedly shortened bone conduction usually indicates a perception apparatus impairment. Bone conduction, however, is affected by many factors, such as age, the thickness of the skull, adhesions of the dura to the bone, etc.

The duration of bone conduction has always seemed to me most important. For upon it rests in a large measure the diagnosis of the hearing impairment, especially with reference to the question of whether it is the conduction apparatus or the perception apparatus that is involved, or whether it is a combination of the two.

The Rinne test compares the air with the

bone conduction in the same individual. In normal cases we have the positive Rinne, that is, air conduction is much longer than bone; whenever bone conduction is longer than air, we have the negative Rinne. After the tuning fork is no longer heard when applied to the region of the mastoid antrum, the sound will still be heard by air conduction in the normal positive Rinne. When air conduction is longer than bone, but both factors are shorter than normal, we have a positive Rinne, but one that shows an inner ear lesion. There are also several varieties of the negative Rinne, depending upon whether the bone conduction is greatly lengthened or shortened. A negative Rinne usually means an impairment of the conduction apparatus, but when both air and bone conduction are much shorter than the normal, even though bone conduction is still longer than air, it usually means a combination of inner and middle ear disease. With an "infinitely negative" Rinne there is no hearing by air but slight hearing by bone, and this usually means that the ear under examination is practically deaf, that the hearing by bone is due to diagonal resonance, and is really heard in the opposite or normal ear.

The determination of the upper and lower tone limits of the individual is very important. In order to find the lower tone limit, we begin with the lowest forks at our command, C-2 (16 double vibrations) or C-1 (32 double vibrations). The fork is struck, the eyes of the patient are closed, and approaching him, he is instructed to say when he first hears the sound. Of course he must differentiate between merely feeling the vibrations of the air striking the auricle, and actually hearing the tone of the fork. We advance in the scale until we reach the point at which the patient begins to hear, and that is the lower limit for that ear. We then continue up the octaves until we reach c-4 and c-5.

There are three ways of exciting the highest forks. One is by rubbing the prongs with the fingers, and if the tone is not heard, striking the prong with the finger nail, and if that is not heard, striking the fork with a metal hammer. When testing with the high tones it is important that the opposite ear is closed, and that the fork (c-4, 2048 d.v.) or c-5 (4096 d.v.) is held closely to the ear that is being examined. When the

patient no longer hears the sound, remove the fork for a second, to avoid the "fatigue" symptom, and then return it to the ear. Tones higher than c-5 are usually tested with whistles or the monochord. The Edelmann-Galton and the Schæfer-Galton are the preferable ones, and these are supposed to produce tones as high as 18,000 to 20,000 d.v. The difficulty with the whistles, however, is that, first of all, it is hard for the patient to distinguish between the actual tone and the sound of the air going through the whistle. Secondly, whistles are easily impaired, so that accuracy of tone is not obtained. Thirdly, it is difficult to get either uniform pressure with the bulb, or to produce sufficient pressure needed for the very highest tones. However, as a rough estimate, whistles serve very well. The Schæfer-Struychen monochord has a range of about 500 to 20,000 d.v., and possesses the great advantage that the highest tones can be tested both by air and by bone conduction.

The lower tone limit is usually raised in diseases of the conduction apparatus; and the upper tone limit is usually lowered as soon as any involvement of the perception apparatus occurs. If, later, there is further impairment of the inner ear all tones, high, middle and low are diminished.

The audiometer is a very useful instrument in many ways, but with the type usually employed in office practice (the 2 A of the Western Electric Co.), the lowest tones as well as the highest tones cannot be tested. While it is difficult, if not impossible, to properly test bone conduction with the audiometer, this can be easily done with tuning forks. The audiometer has the great advantage of furnishing a definite graph or curve which may be used for comparison with one's own or some other otologist's examination or record. The disadvantages, however, lie in the (1) fact that it is rather expensive, that (2) the type used for office work, namely the 2 A (Western Electric Co.), has only a range from 64 to 8,192 double vibrations; that (3) individual tones cannot be tested, but only the octaves, and (4) that as before said, bone conduction cannot well be determined with the audiometer, at least not with the bone conduction attachment thus far developed. Tuning forks can be used for all tests to make a complete diagnosis, and with a small in-

strumentarium. Five or six good forks are all that are necessary for the standard hearing tests, the Schwabach, Weber, Rinne, et cetera.

The newest development is the manufacture of tuning forks of a magnesium alloy, consisting of magnesium 95.6 per cent, manganese 0.4 per cent, and aluminum 4 per cent. These forks are being manufactured at Riverbank Laboratory at Geneva, Illinois, by Mr. B. E. Eisenhour. The advantage of these forks lies in the fact that they are rustproof and have a specific gravity about one-third that of steel, making it very convenient to hold and manipulate them. When forks are not nicked they tend to rust unless they are properly handled and oiled. If they are nicked they sooner or later peel, and the vibrations of the loose pieces of metal cause adventitious sounds.

The Gellé test is used for the purpose of seeing whether fixation of the foot plate of the stapes is present. On compressing the air in the external auditory canal, the ossicles, including the stapes footplate, are pushed inward, and in normal cases the hearing for the time is temporarily diminished. A hard rubber tip connected with a Politzer bag by a piece of tubing is inserted air tight into the auditory canal, a tuning fork is placed either upon the head, the tubing or the bulb of the bag, and any change in hearing noted during compression. Normally the hearing is diminished during the compression and returns when the pressure is released. If there is a fixation, however, increase and release of pressure do not change the hearing. The test is rather unreliable for it is difficult to get an airtight occlusion of the auditory external meatus, and secondly, unless the patient is very intelligent, it is difficult to obtain satisfactory statements regarding a change in the hearing.

The Stenger test is used for the detection of simulation of total unilateral deafness. Two forks of the same intensity and pitch are employed, (a-1, 435 d.v.) are very often used, to see whether the sound entering one ear "masks" that entering the other ear from a greater distance. The patient is blindfolded during the test. In a normal individual if one fork is held closer to, let

us say, the right ear than it is to the left, the individual will hear the sound only in the right ear because that is the louder and masks the sound entering the left ear. If the simulator pretends that he is totally deaf in the right ear, we find at which distance (let us say ten inches) he hears the fork in the left or good ear. With that fork now sounding ten inches from the good ear, the other fork is brought closer to the right ear, for instance a distance of four inches. The simulator then really hears the sound only in his right ear but dare not admit it. Not knowing that the fork is also sounding at the left or good ear, he states that he does not hear anything at all, and thus is trapped.

There are other tuning fork tests such as the Lucaë-Dennert, the Bing, the Politzer and others, but they are not of great importance so far as practical work is concerned. The Weber, the Schwabach and Rinne tests are essential for determining the diagnosis of hearing defects.

Rarely do nose operations have any influence upon the hearing. Obstructions on one or the other side of the nose have practically no effect upon the hearing. Interference with proper aeration of the eustachian tube by marked hypertrophy of the posterior end of the inferior turbinates or the presence of adenoids in the nasopharynx, may have a decided effect on the eustachian tube and produce impairment of hearing of the conduction type. Likewise, infections of the nasal accessory sinuses with drainage of pus into the nasopharynx may also lead to involvement of the middle ear mechanism. The removal of septal spurs, deviation, etc., is of no value so far as the relief of hearing defects is concerned.

Tuning fork and other tests are only adjuncts in the making of a diagnosis of hearing defects. A careful examination of the patient, including ears, nose, nasopharynx and pharynx is extremely important. The correlation of all the facts obtained by the history, examination and functional testing of hearing gives one the diagnosis, permits the formulation of the prognosis and the outlining of treatment.

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A SIMPLIFIED METHOD OF CONTROLLING DIABETES MELLITUS*

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It was not many years ago that the treatment of diabetes mellitus was a hopeless procedure. The starvation method of Allen,¹ from an experimental point of view, was a step toward a better understanding of the disease. Its application, however, was only of benefit in the very mild cases. In the severe diabetic, it only prolonged, for a short time, the life of a chronic invalid.

With the advent of the high fat diet of Newburgh and Marsh,² and the application of the fundamental benefits derived from a semi-starvation regime, we first were able to treat and maintain, as useful members of society, a large per cent of diabetics.

The arrival of insulin was most opportune. It came when dietary treatment had been successful in about three-quarters of all cases. It gave us an instrument whereby the diabetic with a very small tolerance, the coma case, and the patient upon whom operative measures are imperative can be controlled. At the present time, diet alone, or diet plus insulin, makes the treatment of diabetes mellitus as successful as the treatment of pernicious anemia with liver. It is one of the most scientifically rational therapeutic methods we have at our command. With a few of the simple fundamental ideas of nutrition in mind, one can regulate and control a diabetic as easily and well as a patient with cardiac failure.

The food with which we feed our bodies, when chemically analyzed, falls into six groups: carbohydrates, proteins, fats, water, salts, and vitamins. The first three groups yield our energy, and it is with these foods that we are directly concerned. The utilization of carbohydrate, protein, and fat by the body is well illustrated in Table No. I.

The ability is lost in the diabetic to burn completely the units of the foods eaten. The body then attempts to excrete these substances, and, as a result, glycosuria and acetonuria occur. This is again illustrated in Table No. I.

It³ has been shown in the total diabetic dog that all of the carbohydrate, 58

per cent of the protein, and 10 per cent of the fat is excreted as glucose. This explains why the use of large amounts of protein or carbohydrate are undesirable in a diabetic, and also why fat, with its low available glucose value, is incorporated as the principal food. Furthermore, the calories yielded by fat are roughly 9 for each gram, whereas those yielded by protein and carbohydrate are but 4 for each gram.

The average physician is not interested in the FA/G ratio, the minimum protein requirement, or the hundred and one other fundamentals that have made the whole subject of diabetes mellitus so complex to him. He does not have the facilities nor the time to do blood sugars, CO₂ combining powers, blood fats, or to calculate complicated and weighed diets.

He desires, instead, a simple plan, whereby he can control the diabetic in the shortest possible time and with a minimum amount of effort. It is not my purpose to discuss the many unsolved problems relating to diabetes mellitus. My object is to present in a simplified form the routine treatment of diabetes mellitus with its diets which have been used successfully in the University of Michigan Hospital for the past ten years. Many of the fundamentals necessary for the successful treatment of diabetes mellitus are incorporated in these diets.

The successful treatment of diabetes mellitus is possible only by the education of the patient. The nature of the disease and its many complications must be explained to him by the physician. The importance of diet in the treatment and its strict observance are essentials which must be impressed upon his mind. Furthermore, the physician

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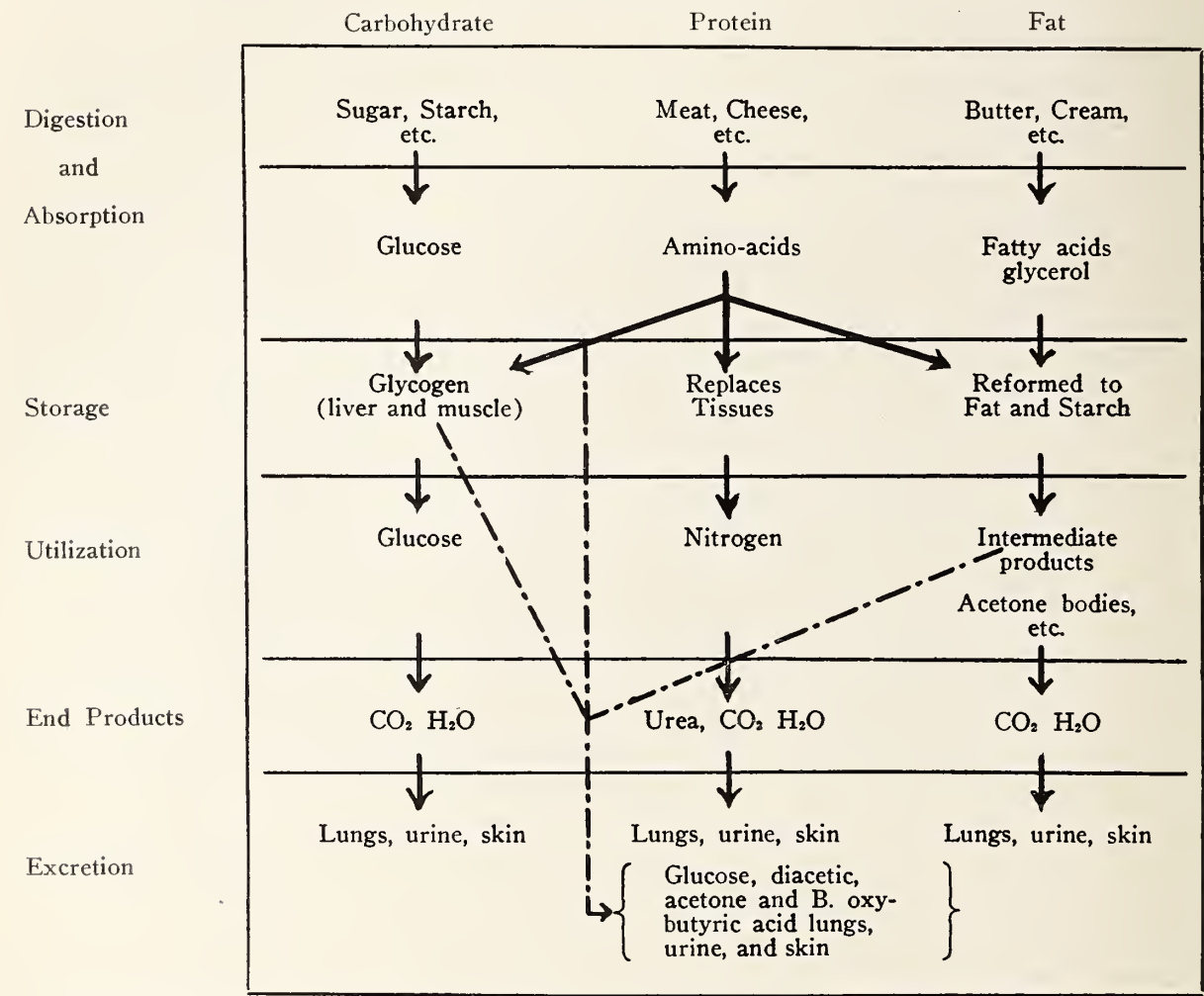
†Dr. Arthur C. Curtis is a graduate of the University of Michigan, B.S. 1923, M.D. 1925. During his last two years in the Medical School he carried on several experimental problems with Dr. Newburgh. His internship was at the University Hospital. In the fall of 1927 he was made an instructor in Internal Medicine and in 1929 Assistant Professor.

should instruct the patient in a method of testing the urine for sugar and tell him when to make his tests. A notebook should be carried by each patient with the date, the time the specimen was voided, and the color of the test recorded in it. This gives that precipitates after boiling, or a clear solution, is negative.

The acetone body commonly tested for is diacetic acid. A few drops of 10 per cent ferric chloride are added to a test tube 2/3 full of urine. Often a heavy precipitate of

TABLE NO. I

A GRAPHIC REPRESENTATION OF THE DIGESTION, ABSORPTION, STORAGE, UTILIZATION, AND EXCRETION OF CARBOHYDRATE, PROTEIN, AND FAT.*



*The normal utilization, metabolism and excretion is represented by ➤
The diabetic utilization, metabolism and excretion is represented by - - -

the attending physician an accurate record of his patient each time he is seen.

An economical way to test the urine is to use 20 drops of Benedict's qualitative reagent and 1 drop of urine. Boil in a cup of water for 5 minutes. If a red color appears during the boiling, it is spoken of as "four plus" and means a glycosuria of 1 per cent or more. A color of yellow with some green is a "three plus"; a green with some yellow is a "two plus"; a green heavy cloud is a "one plus," and a fine green cloud salts is formed. This should be filtered off and a few drops more of ferric chloride added. If the color is red (wine color), it means there is diacetic acid in the urine. When diacetic acid is present, there is also acetone. One should remember that some of the common drugs give a false diacetic test. The salicylates are the common offenders. The color developed by them is more purple than that due to diacetic acid, and it does not disappear with boiling, whereas the color due to diacetic acid does.

If insulin is required, the patient should be advised in detail regarding asepsis, insulin injection, and the care of the wound.

All patients should have a gram scale and the diet should be weighed! We use the Hanson scale, which can be purchased from

have been suggested by some minor complication such as pruritis. He usually does not require insulin, and rarely has clinical acidosis. Though these patients can often be controlled by diets of "omission," i. e. restricting the sugar and starch only, this is

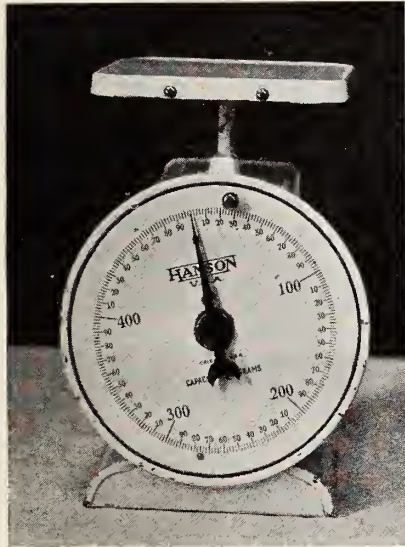


Figure 1. The Hanson Scale with the dial set at zero

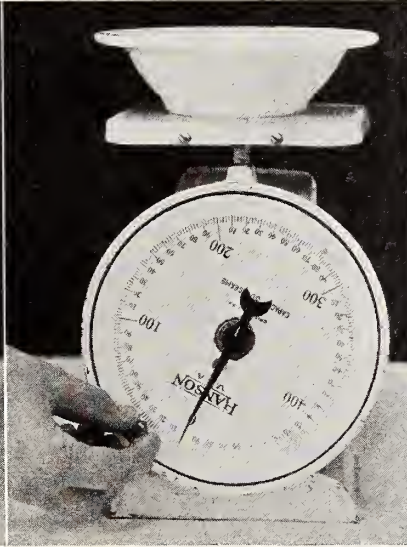


Figure 2. The Hanson Scale with an empty dish. The dial is again set at zero

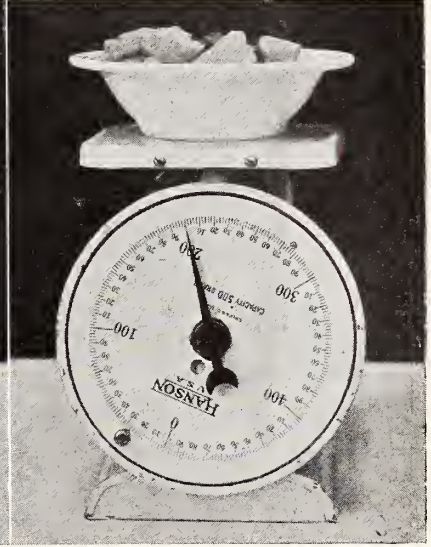


Figure 3. The Hanson Scale with 200 grams of melon. Only the actual food is weighed

the Hanson Scale Company of Chicago. These scales are simply operated with a moving dial. The empty dish is placed on the scale and the dial moved so that the scale reads zero. The food required by the diet is then placed in the dish. The dish is then removed, another placed on the scale, the dial adjusted to zero, the food added, and the process continued until the diet is complete.

Preparing a weighed diet is as simple for the patient as it is for a cook to follow a recipe. Once a patient has accustomed himself to a weighed diet, he soon learns to estimate accurately the quantity, and when in a position where it is impossible to obtain a weighed diet, he can estimate his food quite accurately.

If one can convince the wife, mother, or sister of the patient of the seriousness of this disease, and that diabetic patients on strictly observed diets are able to lead normal lives, one usually does not have much trouble in getting the coöperation of the people who are responsible for the diets.

The mild diabetic is usually middle aged or older. His symptoms are often "silent" and the disease may have been discovered by some casual routine examination, or it may

not a good method of treatment. Minor infections, such as the common cold, may depress their tolerance for glucose to such a low level that they become severe diabetics who require rigid dietary restrictions.

Such a diabetic is first put on a diet which is low in calories and low in its available glucose content. This diet is known as a desugarization diet, and the patient remains on his diet until sugar-free. The diet has 50 grams of available glucose and contains about 1,400 calories. This limited food in-

DIET NO. I

50 Grams of Available Glucose

Breakfast

Bacon 30 gms.
Egg—1
Cream (Heavy Whipping) 20 gms.

Dinner

Eggs—2 or substitute (Hamburg 85)
(100 gms. Tomatoes)
Vegetables 5% 200 gms. (100 gms. Cabbage)
Mayonnaise 30 gms. (or Cream 30 gms.)
Butter 20 gms.
Cream 20 gms.

Supper

(Lettuce 75 gms.)
Vegetables 5% 275 gms. (Sauerkraut 200 gms.)
Mayonnaise 30 gms. (or Cream 30 gms.)
Butter 15 gms.
Cream 20 gms.

The articles of food in parentheses are suggestions taken from Tables II and III.

TABLE NO. II
CLASSIFICATION OF VEGETABLES AND FRUITS
(According to carbohydrate content)

5 per cent Vegetables	10 per cent Fruits and Vegetables	15 Per cent Fruits and Vegetables
Asparagus	Beets	Apples
Brussels sprouts	Blackberries	Apricots
Cabbage	Cantaloupe	Blueberries
Cauliflower	Carrots	Cherries
Celery	Cranberries	Currants
Cucumbers	Gooseberries	Huckleberries
Egg plant	Grapefruit	Lima beans (green)
Endive	Green olives	Oranges
Green peppers	Kohl-rabi	Parsnips
Greens	Mushrooms	Pears
Leeks	Onions	Raspberries
Lettuce	Peas	
Marrow	Peaches	
Okra	Pineapple	
Pimientos	Squash	20 Per cent Vegetable
Pumpkin	Strawberries	
Radishes	Turnips	Potato
Rhubarb	Watermelon	
Ripe olives	also	
Sauerkraut		Bread is 52 per cent Carbohydrate
Sorrel		
Spinach	Cereals—(10 gms. may replace	
String beans	100 gms. of 10% vegetables)	
Swiss chard	Cornflakes	
Tomatoes	Oatmeal (dry weight)	
Watercress	Popcorn	
	Puffed Rice	
	Puffed Corn	
	Puffed Wheat	
	Shredded Wheat	
	Wheaties	

Vegetables and fruits may be weighed either before or after cooking, with the exception of apples for apple sauce or baked apples and oatmeal (rolled oats). These must be weighed before cooking.

Carbohydrate Equivalents

The amounts of vegetable which contain equal amounts of carbohydrates, and which may be used to replace each other are shown below.

100 gms. 5% vegetable = 45 gms. of 10% vegetable = 30 gms. 15% vegetable

100 gms. 10% vegetable = 225 gms. of 5% vegetable = 70 gms. 15% vegetable

100 gms. 15% vegetable = 325 gms. of 5% vegetable = 145 gms. 10% vegetable

Sugar-free canned fruits, tomatoes, peas:

Rosedale brand—Libby, McNeil & Libby, Chicago, Ill.

Richelieu diabetic brand—Sprague Warner Co., Chicago, Ill.

Dieta brand—W. N. Clark Co., Syracuse, N. Y.

Cellu brand—Chicago Dietetic Supply Co., 1750 W. Van Buren St., Chicago, Ill.

take lowers the patient's metabolism, allows only maintenance calories at most, and restricts the glucose intake so that the excess of sugar in the blood is either burned or excreted.

The patient is asked to collect a 24-hour specimen of urine, beginning just after breakfast and extending to just before breakfast the next morning, estimate its quantity, test it qualitatively himself and record the color, or bring you a small portion to test. It is best, but not essential, to do a quantitative sugar test. The diet is not essentially altered until the patient is sugar-free. Food substitutions may be made from the following tables to give the diet variety, but the protein, fat, and carbohydrate totals are left unchanged. Daily

DIET NO. II

70 Grams of Available Glucose

Breakfast

Bacon 40 gms.

Eggs—1

Cream (Heavy Whipping) 45 gms.

Dinner

Eggs—2 or substitute (Hamburg 85)

Vegetables 5% gms. (100 gms. Cabbage plus 100 gms. Tomatoes)

Vegetables 10% 50 gms. (Grapefruit)

Mayonnaise 30 gms.

Cream 20 gms.

Supper

Vegetables 5% 200 gms. (Lettuce 50 gms. plus Sauer Kraut 150 gms.)

Vegetables 10% 50 gms. (Peaches)

Mayonnaise 30 gms.

Butter 20 gms.

Cream 20 gms.

Use heavy whipping cream.

The articles of food in parentheses are suggestions taken from Tables II and III.

urines are tested and the patient usually is sugar-free by the third day on the diet.

The next diet given the patient increases all food elements, but the essential food increase is glucose, which now is 70 grams.

This diet increases the glucose total 20 grams and the calories 400. The patient is left on this diet for three days. The urine should be collected in 24 hours samples if possible. Qualitative tests are again done on each sample by the patient, and the physician notified of the result. Should the patient remtain sugar-free on this diet for a three-day period, a still higher diet is given. This diet increases the total available glucose to 90 grams and the calories to 2,340.

TABLE NO. III
EGG SUBSTITUTIONS
Any of the following may be used in place of 2 eggs.

	Grams
Beef steak (fat).....	85
Roast beef.....	56
Boiled beef.....	68
Omit butter	10
Omit cream	5
Cheese, American	50
Omit butter	10
Omit vegetable 5%.....	50
Cheese, Cottage.....	70
Add butter	10
Omit vegetable 5%.....	70
Chicken, Roast	46
Chicken, Stewed.....	56
Codfish (salt)	55
Add butter	10
Add cream	5
Crabmeat	85
Add butter	10
Dried beef	45
Add butter	10
Fish (fresh)	75
Add cream	5
Ham (boiled)	65
Omit butter	5
Ham (smoked)	85
Omit butter	25
Liver (beef or calves).....	50
Bacon	30
Omit butter	15
Lamb (chops or steak).....	70
Roast Lamb	46
Lamb stewed	56
Omit butter	10
Lobster	80
Add butter	10
Oysters	160
Add butter	10
Omit vegetable 5%.....	170
Oysters	100

Bacon	50
Omit butter	30
Omit vegetable 5%.....	100
Pork chops (med. fat).....	85
Omit butter	15
Omit cream	5
Roast pork	65
Omit butter	5
Salmon (canned)	70
Add cream	5
Sardines	55
Sausage (summer)	50
Omit butter	15
Shrimp	50
Add butter	10
Add cream	5
Sweetbreads (boiled wt.).....	64
Sweetbreads (boiled wt.).....	48
Bacon	30
Omit butter	15
Veal steak or chop (fat).....	65
Roast veal	40
Add butter	10

DIET NO. III	
90 Grams of Available Glucose	
Breakfast	
Bacon	30 gms.
Eggs	—2
Vegetables 10%	100 gms. or cereal 10 gms.
Cream (Heavy Whipping)	80 gms.
Dinner	
Eggs—2 or substitute (Hamburg 85)	
Vegetables 5%	270 gms. (Tomatoes 100 gms. plus Cabbage 170 gms.)
Mayonnaise	40 gms. (or cream 40 gms.)
Cream	30 gms.
Butter	30 gms.
Supper	
Eggs—2 or substitute (Boiled Ham 65)	
Vegetables 5%	200 gms. (Lettuce 50 gms. plus Sauer Kraut 150 gms.)
Vegetables 10%	40 gms. (Peaches)
Mayonnaise	40 gms. (or cream 40 gms.)
Cream	30 gms.
Butter	30 gms.
Use heavy whipping cream.	
The articles of food in parentheses are suggestions taken from Tables II and III.	

The patient remains on this diet for three days with daily 24 hour urine samples collected, each of which is examined for glucose qualitatively. If no glycosuria occurs, the patient is ready for a further increase in carbohydrate.

The following steps are similar to the other increases in diet except in one respect. The former increases in calories and available glucose were made by adding protein, fat, and carbohydrate to the diet. The last diet is high enough in protein, and contains enough fat for calories, so further increases are made by adding carbohydrate only.

This is usually done by adding to the latter diet 30 grams of glucose as 600 grams of 5 per cent vegetables or 300 grams of 10 per cent vegetables. If the bulk of the former diet is sufficient, 10 per cent vegetables are added. If the patient desires more bulk,

cornflakes of the breakfast removed. This makes the calories about 3,000 and leaves the available glucose of the diet still the same. The additional cream is served at breakfast.

If the patient is obese, and this is fre-

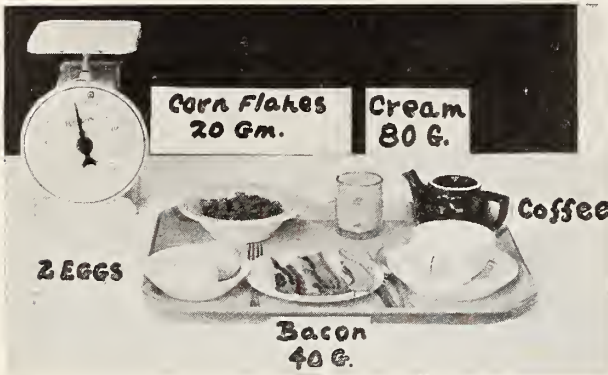


Figure 4. The breakfast of Diet No. IV

5 per cent vegetables are added. This increases the diet 30 grams of glucose, 120 calories, and makes an available glucose of 120 grams.

DIET NO. IV

120 Grams of Available Glucose

Breakfast

Bacon 40 gms.
Eggs—2
Vegetables 10 % 200 gms. or cereal 20 gms.
Cream 40% 80 gms.

Dinner

Eggs—2 or substitute (Hamburg 85)
Vegetables 5% 270 gms. (Tomatoes 100 gms. plus Cabbage 170 gms.)
Vegetables 10% 110 gms. (Grapefruit)
Mayonnaise 40 gms. (or cream 40 gms.)
Cream 30 gms.
Butter 30 gms.

Supper

Eggs—2 or substitute (Boiled Ham 65)
Vegetables 5% 200 gms. (Lettuce 50 gms. plus Sauer Kraut 150 gms.)
Vegetables 10% 150 gms. (Peaches 150 gms.)
Mayonnaise 40 gms. (or cream 40 gms.)
Cream 30 gms.
Butter 30 gms.

Use heavy whipping cream

The articles of food in parentheses are suggestions taken from Tables II and III.

This diet is, in most cases, a maintenance diet. It contains enough calories for the average individual and has a sufficient amount of protein. The relation of carbohydrate to fat is such that the diet is pleasant to eat, and it has enough bulk to satisfy the hunger of the patient.

If the patient is required to do very hard physical labor and needs more calories than are given by the fourth diet, 130 grams of 40 per cent cream are added and half of the

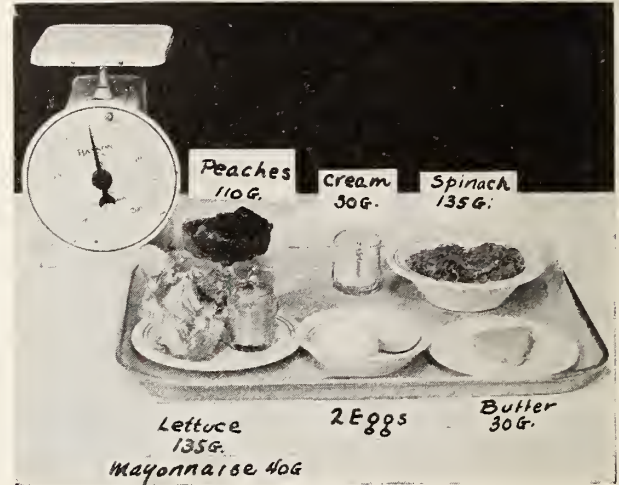


Figure 5. The dinner of Diet No. IV



Figure 6. The supper of Diet No. IV

quently the case, the diet must serve a two-fold purpose. It must keep the patient aglycosuric and also reduce the weight. Again this same maintenance diet is used with slight modifications. If the mayonnaise and cream of Diet No. IV is omitted, it removes approximately 100 grams of fat and thereby reduces the calories to about 1,300, which is a good reduction diet. (See Fig. 8.)

If the physician wishes to give more carbohydrate than suggested in the maintenance diet, or if he desires to determine the patient's tolerance for glucose, the routine is continued of increasing the glucose of the diet 30 grams after 3 day periods of aglycosuria. This is done by the addition of vegetables of the 5 per cent, 10 per cent and 15 per cent carbohydrate group, or as the diet

gets higher in glucose as potato, which is a 20 per cent vegetable, or as bread, which is 52 per cent carbohydrate. All additions are made to the maintenance diet. Each addition must be divided into 3 equal parts and one part added to each meal. Diabetics

protective mechanism his body can assemble. Another method is to put him on the desugarization diet first described which contains 50 grams of available glucose and 1,400 calories.

The severe diabetic is usually young.

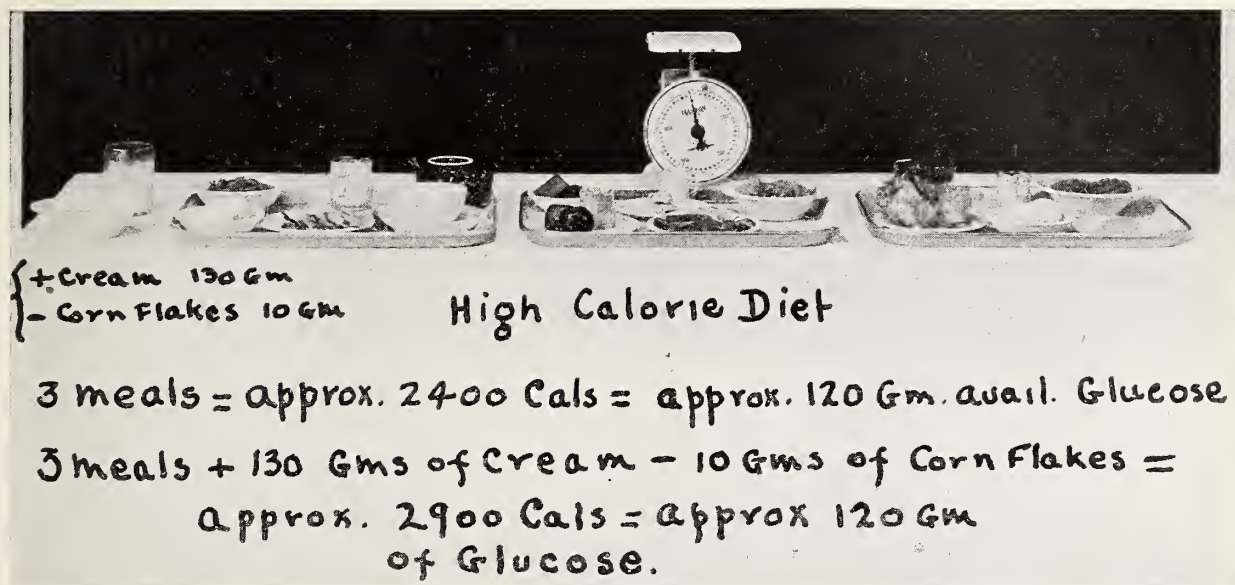


Figure 7. Diet No. IV converted into a higher calorie diet by the addition of cream and the removal of one-half the cornflakes.

must receive approximately the same amount of glucose each meal. They must not have a light breakfast and heavy dinner.

Should the patient fail to desugarize on the first, second, or third diets, then the patient either has an infection depressing his tolerance, or he is a patient who must be given insulin. In the former case, the removal of the infection will raise the tolerance. The latter method of treatment will be discussed later.

When a patient is stabilized on a maintenance diet, weekly urine examinations, done qualitatively by the patient and recorded, are essential. If glycosuria appears, it should be reported at once to the physician.

If a patient is stabilized and aglycosuric on a maintenance diet and then develops an infection with a resultant depression of tolerance, he should immediately decrease his diet in half and continue on this decreased diet until the glycosuria subsides or the infection resolves. By this I mean that each serving of his diet should be one-half the amount called for on the diet sheet. This automatically puts him on a desugarization diet, and benefits him in keeping him aglycosuric at a time when he needs all the pro-

The disease is often sudden in its onset, and the symptoms are marked. When first seen, they are often dehydrated, thin, lethargic, with an acetone breath, severe glycosuria, and acetonuria. It is advisable, though not imperative, that the patient be confined to bed. A reduction of his metabolism by rest is beneficial in itself. He is also given the first diet suggested in the treatment of the mild diabetic. It is imperative, however, that he should receive at least 4,000 cubic centimeters of fluid daily to relieve the dehydration produced by the acidosis.

The desugarization of a patient in this group is slower and hence from one to six or seven days may elapse before this process has been completed. After complete desugarization for three days has been obtained, the next diet is given and the treatment continues as it did in the mild group. Because diabetics of this type are more severe and longer intervals occur before complete desugarization, it is more important to have daily urine sugar records. They tell of the progress of the desugarization process. If the 24 hour glucose excretion decreases each day, one knows the diet is serving its purpose. If, however, the glu-

cose in the urine remains the same or increases or the acidosis becomes more marked, one must put the patient on a maintenance diet with insulin.

It is not my desire here to discuss the relation of insulin to tolerance. The only fact

If some one specimen, such as that from 8 A. M. to 12 N., shows an increase in its glucose content, then the dose of insulin given before breakfast is increased 5 or 10 units as necessary, depending upon the amount of glucose or the symptoms of the patient. By

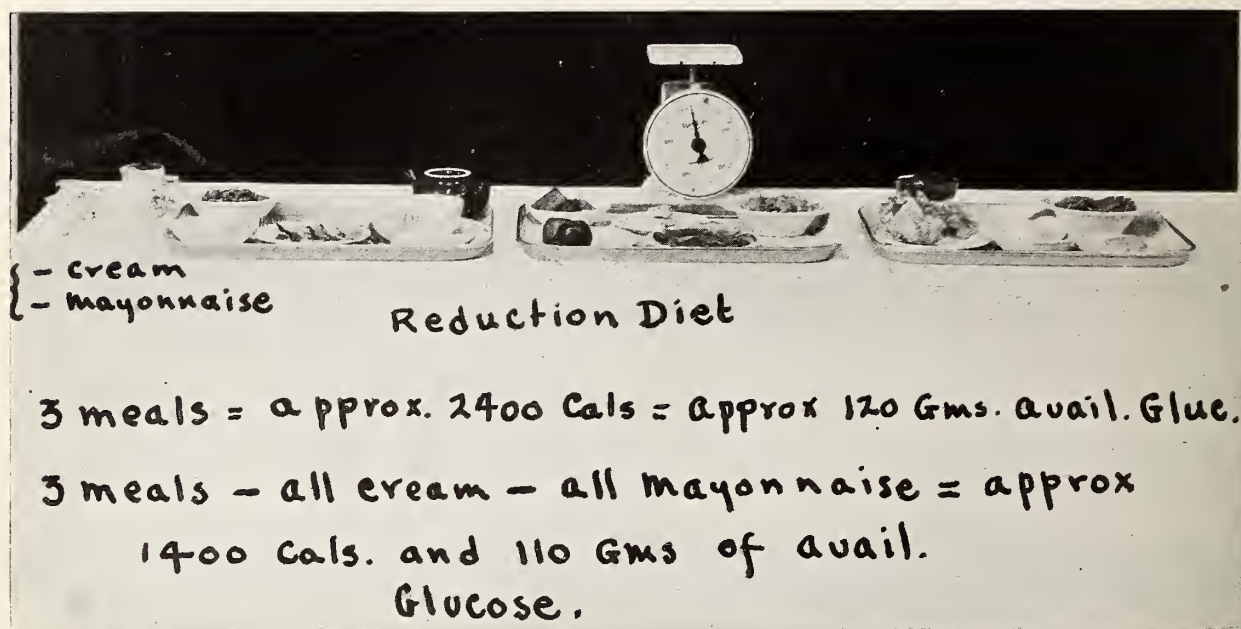


Figure 8. Diet No. IV converted to a low calorie diet by the removal of the cream and mayonnaise.

I wish to use at this time is that insulin aids in the combustion of glucose. It is said that one unit of insulin will cause the oxidation of 2 grams of glucose. This is not true! A patient in acidosis will only burn a fraction of a gram of glucose for every unit of insulin. Conversely, a controlled diabetic may combust as many as 3 or 4 grams of glucose for each unit of insulin. The dose of insulin then is empirical, and the amount given must be measured according to the clinical course of the patient.

We follow our patients receiving insulin in the following manner. The patient is given a maintenance diet. Urine specimens are collected from 8 A. M. to 12 N., from 12 N. to 5 P. M., and from 5 P. M. until 8 A. M. The patient is fed at 8 A. M., 12 N., and 5 P. M. Ten units of insulin are given one-half hour before each meal. Each fractional urine is examined for glucose and the approximate amount recorded. The same diet and insulin dosage are continued. The fractional urine specimens are again examined for glucose and compared with those of the previous day. If the patient shows a decrease in the glucose in each specimen, the insulin dosage is left unchanged.

using fractional urine collections one has an index of the metabolism of glucose for the preceding meal, and one can tell whether to increase, decrease, or continue the same insulin dosage.

Experience shows that, in most cases, the morning dose of insulin must be the largest, the evening dose smaller, and the noon dose the smallest, or it can often be omitted entirely. More than 3 doses of insulin a day should be avoided if possible as they are at best a burden to the patient. Large doses are painful, expensive, and often cause insulin reactions and should be avoided if possible.

Every patient taking insulin should be informed of the cause and symptoms of an insulin reaction. Each patient should carry a lump of sugar with him constantly, to be taken when such emergencies arise. He should also be instructed to report any reaction to his physician so that the proper insulin dose can be reduced. In the hospital, insulin reactions are often controlled by giving $\frac{1}{2}$ glass of orange juice or $\frac{1}{2}$ c.c. of epinephrin. The latter mobilizes the glycogen from the storehouses and relieves the symptoms quite readily.

As soon as the diagnosis of diabetic coma has been made, inject 50 units of insulin subcutaneously. Severe coma should be cared for in a hospital with a nurse in attendance if possible. The initial dose of insulin should be given without waiting for the patient to arrive at the hospital.

The subsequent care of a coma case depends on the symptoms of the patient, but it is safe to say that several more large doses of insulin will be necessary. A good plan to follow is to obtain urinary specimens every 3 hours, making sure that the bladder is emptied each time. This may have to be done by catheterization. Each specimen is tested for glucose and acetone bodies, and it represents the metabolism of the patient during the previous 3 hours. If glycosuria and acetonuria persist, injections of 20 to 50 units are necessary every three hours until the coma has disappeared.

All coma cases are dehydrated. The administration of fluid is an essential part of the treatment, and it can be safely said that too much fluid cannot be given. Each patient should receive at least 150 c.c. of fluid each hour. This can often be given by mouth, but if the coma is deep, a sub-pectoral infusion of normal saline, or better, Ringer's solution should be begun and continued until fluid by mouth can be administered.

After the coma has begun to subside and should the urine still contain large amounts of acetone bodies, but little glucose, then each dose of insulin should be given with one-half as many grams of glucose. Glucose may be given by mouth as orange juice, calculating 10.8 grams of glucose for each 100 c.c. of orange juice, or as corn syrup, which is roughly 100 per cent glucose. If the patient is not conscious, a sterile solution of 10 per cent glucose can be given intravenously. It is not necessary, and it is often detrimental, to give glucose with each dose of insulin. Glucose should be given only when the urinary sugar is low and the acetone bodies are present in large amounts. Instead of giving glucose with insulin, we feed our patients 40 grams of glucose as orange juice (orange juice 230 grams, sugar 15 grams) each meal time. This allows slower absorption of the glucose and helps stabilize the patient on a diet so that when the coma has subsided we are already giving and covering with insulin 120 grams of glucose a day, which is equal to the total glucose of

a maintenance diet. As soon as the patient can eat, a soft diet such as follows is given.

DIET NO. V—SOFT DIET

120 Gram of Available Glucose.

Breakfast—Choose one of the following groups:

I.

Soft boiled egg	
Milk toast	
Toast	30 gms.
Milk	100 gms.
Butter	10 gms.

II.

Scrambled egg	
One egg	
Cream	30 gms.
Butter	10 gms.
Cereal	10 gms.
Milk	120 gms.
Cream	50 gms.

III.

Eggs	2
Toast	20 gms.
Butter	10 gms.
Milk	120 gms.

IV.

Toast	30 gms.
Butter	10 gms.
Applesauce	
(Strained)	60 gms.
Cream	50 gms.

V.

Cereal	10 gms.
Milk	120 gms.
Bread	20 gms.
Butter	5 gms.

VI.

Bread	20 gms.
Butter	5 gms.
One egg	
Cooked Peach	90 gms.
(Strained) or	
Applesauce	60 gms.
(Strained)	

Dinner and Supper—Choose one of the following groups at a meal:

I.

Baked potato	100 gms.
Butter	10 gms.
Milk	130 gms.

II.

Bread	25 gms.
Butter	5 gms.
Baked custard	
One egg	
Milk	100 gms.
Cream	80 gms.
Saccharine	¼ grain
Vanilla or nutmeg	

III.

Bread	25 gms.
Butter	5 gms.
Soup	
Asparagus	100 gms.
(Strained)	
Milk	100 gms.
Cream	50 gms.

IV.

Mashed potato	
Potato	100 gms.
Butter	10 gms.
Milk	50 gms.
Cooked Peach	60 gms.
(Strained)	

V.		
Cooked rice	100	gms.
Milk	140	gms.
Butter	5	gms.

VI.		
Eggs	2	
Bread	30	gms.
Tomatoes	100	gms.
(Cooked and Strained)		

and this in turn is replaced as soon as possible by Diet No. IV. By this method the patient is carried through the difficult period following coma with comparative ease. All coma cases are not subsequent insulin patients. Coma may have been produced by a depression of tolerance as a result of an infection, and when both the coma and the infection have cleared up, the patient may be able to tolerate a diet comparatively high in glucose without insulin.

The treatment of the preoperative and post-operative diabetic does not differ from the treatment of the uncomplicated diabetic. A few simple rules must be followed. Their observation increases the prognosis of the diabetic to a per cent somewhere near the non-diabetic. These rules are as follows:—

1. No diabetic should be operated upon until he is stabilized and sugar-free on a maintenance diet, with the exception of a real surgical emergency.
2. All operations should be as rapid as possible, with gas as the anesthetic of choice.
3. No diabetic should miss a meal. If the patient cannot eat, 40 grams of glucose as orange juice are given each meal time. If this cannot be taken, 40 grams of glucose should be given intravenously as a 25 per cent or 10 per cent glucose solution. An infusion of 5 per cent glucose can be used, allowing the patient 40 grams of glucose every 4 hours of the day and discontinuing the infusion of glucose solution during the night. The pre-

operative breakfast should either be replaced by 40 grams of glucose as orange juice or 40 grams of glucose given intravenously. Always try to keep the diabetic controlled.

4. Fluid should be administered continuously to the post-operative diabetic. Every patient should have 4,000 c.c. as a minimum. It can be given by mouth, Murphy drip, or by infusion. It is as important as any other procedure, except insulin, in the treatment.
5. Post-operative fractional urine specimens should always be collected and insulin dosage, if necessary, based on the results of the urine examinations. Many diabetics will need some insulin for a few days after an operation. There is often a temporary depression of tolerance, and the glycosuria must be continually checked by urine examinations. When the tolerance returns, improvement is rapid, and the insulin must be cut down rapidly or the patient will be upset by insulin reactions.
6. As soon as possible, a liquid diet is given the patient. This is followed by a soft diet, and then a solid diet. If 40 grams of glucose have been given each meal time throughout the more critical periods, and this either tolerated by the body or made available for combustion by giving some insulin, the change to the soft and solid maintenance diet is no more difficult than the same change in a non-diabetic patient.

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CHEWING TOBACCO RESPONSIBLE AS A SOURCE OF SUGAR IN CERTAIN DIABETICS

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In the past 15 years it has come to my attention that many practicing physicians are not familiar with the possibilities of chewing tobacco as a source of unaccounted for sugar in certain diabetics. I have seen in consultation nine patients suffering from severe diabetes, who, in spite of very low carbohydrate diets, still excreted sugar without accountable cause. Two of these patients were in the hospital under the strictest supervision and became quite a puzzle to the physicians in attendance until it was discovered that they were using approximately 2 ounces of chewing tobacco a day. Upon investigation it was found that sugar would appear or disappear from the urine as tobacco was chewed or withheld. Further investigation showed that of samples of tobacco examined, the sugar content varied in different brands used and sometimes in the same brand examined. The brands examined included Plug, Fine-Cut, and Scrap.

All the samples of Scrap tobacco examined showed high sugar content. Conclusions from the investigation so far suggest that persons who chew 2 ounces of Scrap tobacco a day would take into the mouth from 14 to 16 grams of sugar a day.

All the patients were questioned in regard to swallowing tobacco juice and they all denied that they did so voluntarily.

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OCULAR MANIFESTATIONS OF DIABETES*

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In medicine as in real estate we have our "booms." In the treatment of syphilis there was the arsenic boom; in tuberculosis, tuberculin; in smallpox, vaccination; in diphtheria, antitoxin; and many others might be mentioned. The diabetes-insulin boom has only recently been superseded by the hog stomach treatment of pernicious anemia.

Diabetes, one of our more common general systemic diseases, undoubtedly still holds its share of the limelight. It is of interest to the ophthalmologist since the eye often presents symptoms of infinite value to the general practitioner in the diagnosis, treatment, and prognosis of the disease. Insulin treatment at times produces untoward eye symptoms which will be pointed out later. Occasionally the disease is suspected for the first time following an examination of the eyes.

This is particularly true in regard to changes in refraction which have been estimated to occur in from 15 to 20 per cent of diabetic cases. There may be a gradual, or often a sudden and considerable degree

of change toward myopia—the patient actually becomes near-sighted or has a reduction in the amount of previous far-sightedness—giving rise to the mythical lay term of "second sight." The opposite to the above change in refractive error is seen following insulin treatment of the diabetic, where a sudden increase in hyperopia is seen to occur. These changes have all been explained by the physical laws of osmosis: that when the sugar content of the media in which the lens is bathed reaches a certain concentration there is an imbibition of fluid by the lens with a resultant increase of lens volume, producing myopia; in a like

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manner under energetic insulin treatment when sugar metabolism is at a maximum the osmotic flow is from the lens, resulting in marked hyperopia.

The following case referred by Dr. C. W. Lemmon demonstrates a transitory hyperopic refractive error produced by insulin. Mrs. A. B., fifty years of age, gave the history of impaired vision for near starting six or seven weeks previously. This became progressively worse and three weeks ago the distance vision became quite noticeably impaired. The above symptoms followed very closely after the beginning of insulin treatment for diabetes. Examination of the eyes showed the pupils equal and responding well to both light and accommodation. The refractive media (cornea, aqueous, lens, and vitreous) were clear. There was no evidence of gross pathology in the fundi. Refraction:

Vision R.E. = 15/200, with + 2.50 sph. = + 50 cyl. $\times 75^\circ$ = 20/15.

Vision L.E. = 15/200, with + 2.50 sph. = = 20/15. + 1.50 sph. was added for near vision.

One week later the distance vision had again returned to normal and only glasses for near vision were prescribed. In one case under insulin treatment seen here on the ward not only was there a high degree of hyperopia but also a paresis of accommodation due probably to the general debility which accompanied the disease. As sugar metabolism stabilizes, these changes revert to their original normal.

Diabetic cataract is yet another change in the refractive media of the eye and occurs under two chief forms, the first of which is much more typical, presenting a dirty gray homogeneous appearance. It is rapid in its development, occurs bilaterally in young patients and late in the disease. The other form occurs in older patients and takes on the appearance of a senile cataract. Given an otherwise apparently normal eye and a blood sugar within normal limits, there are no contra-indications to removal of the cataract, preferably in its capsule. Insulin seems to have an untoward effect in producing hemorrhages and should be withheld for about four weeks following the operation.

Inflammation of the iris occurs with varying degrees of severity. In the typical case there forms a characteristic flocculent exudate in the pupillary space which results

in a marked reduction of visual acuity. The iris itself is greatly congested and swollen.

Ocular palsies are seen not infrequently in diabetic cases. Vertical diplopia and ptosis of the upper lid are the commonest findings and indicate an involvement of one of the branches of the third nerve. The sixth nerve is at times also involved, producing an internal strabismus. In most cases the paralysis is due to a peripheral neuritis although it is probable that some result from small hemorrhages, in which case the prognosis for recovery of function would be more guarded.

Retinitis characteristic or diagnostic of diabetes has long been a matter of controversy for two chief reasons: Primarily, because it is not found in young individuals, in whom the disease presents its most malignant form; secondly, because it is as a rule found in diabetics who have an associated albuminuria and a heightened systolic blood pressure, either of which can produce a somewhat similar fundus picture. It is thus seen that it is difficult to state positively from an ophthalmoscopic examination alone that a retinitis is or is not of diabetic origin. Hirschberg has grouped together certain retinal lesions which, taken with the general findings, suggest the diagnosis of diabetic retinitis:

(1) An entirely characteristic inflammation of the central portion of the retina with small bright spots, usually also with hemorrhagic points (retinitis centralis punctata diabetica).

(2) Hemorrhages of the retina with the resulting inflammatory changes and degenerations (retinitis hemorrhagica diabetica).

(3) Rarer forms of retinal inflammation and degeneration, the connection of which with the primary disease is yet to be demonstrated.

Hirschberg found none of his retinitis cases were below forty years of age. Only a few cases are reported in the literature below the age of thirty-five. I have seen one case twenty-seven years of age, Miss T. R., referred by Doctor Robert Schæfer. The fundus examination showed a moderate blurriness of each disc nasally. The retinal vessels gave the impression of being filled to capacity, with the arteries showing the silver wire light reflex but producing no depression when overlying a vein. Fine areas of exudate, some of which were con-

glomerate, were seen in the macular region. A sharply defined area of wax-like exudate about the size of the disc was seen at the primary branching of the superior temporal artery of the right eye. There were many small round hemorrhages of the deep variety in the posterior segment of each eye. The urine was positive for sugar but negative for albumin; her blood showed a hyperglycemia.

The prognosis in diabetes is much better than in albuminuric retinitis; 60 per cent live for a period longer than two years following the discovery of the retinitis.

Ophthalmoscopically there is a picture occurring late in the disease which is characteristic of only diabetes. In rare cases there occurs a condition known as lipemia retinalis in which the arteries and veins have the appearance of being filled with milk. They lose their cylindrical shape and

appear flat and ribbon-like. No hemorrhages or exudates occur; the vision remains normal. Lipemia retinalis is produced by an increase in the fat content of the blood, which it is believed must reach a percentage of five before retinal changes are seen. It occurs in young diabetics, the oldest reported case being forty-eight.

Retro-bulbar neuritis, an inflammation of the optic nerve somewhere between the eye and the optic chiasma, is found in diabetics of all ages. It occurs in 10 to 20 per cent of the cases, usually in those addicted to the use of alcohol or tobacco. The patient is suddenly alarmed by the fact that he can only distinguish the hazy outline of objects. Examination of the fundi reveals no pathological change unless the neuritis is prolonged, then some degree of atrophy of the disc may be seen. The fields show a central scotoma for form and color.

THE NEW MEDICAL RESERVE CAMPS

HENRY R. CARSTENS, M.D.†
DETROIT, MICHIGAN

A large number of the members of this society are commissioned in the Medical Reserve Corps of the Army, and as announcements of the Summer Training Camps have recently appeared, a brief report as to the activities conducted at the camps may be of interest to reserve officers. Possibly the memory of war-time camps with endless drilling and constant drudgery exists to such an extent that reservists, while still having a warm interest in national defense and being desirous of continuing their appointments, feel that attendance at camps is an irksome duty which must be discharged from time to time. Conditions have changed, for the writer found attendance at the Fort Snelling camp last summer such a pleasant experience that he hopes to be able to repeat it at frequent intervals.

Fort Snelling is on the outskirts of St. Paul and Minneapolis. The medical camp is conducted in a group of barracks on the reservation. Colonel George A. Skinner, M. C. (Surgeon of the 7th Corps Area), was in charge as Senior Instructor; Lieut.-Colonel W. Lee Hart, M. C. (6th Corps Area), acted as Plans and Training Officer; six or eight Junior Medical and Dental Officers were on duty as supervising instructors. The instruction was arranged in unit groups, six general hospitals, five evacuation hospitals, and seven medical regiments. The total attendance was over 400 officers,

making about 25 in each group. A general schedule had been arranged, but each group was responsible for the details of its own instruction.

The basic subjects were as follows: (1) Military Policy of the United States; (2) The Army of the United States; (3) Topography; (4) Organization of the Medical Department; (5) The Soldier, his Pack and his Problems; (6) The Functions of the "Arms" of the Army; (7) Training; (8) Citizenship in Relation to Military Training; (9) Mechanization of Modern Armies; (10) The Medical Supply Officer and Medical Supplies; (11) The Quartermaster and General Supplies; (12) Chemical Warfare and Warfare Cases; (13) The Mess, the Ration and the Mess Officer; (14) The Non-Commissioned Officer; (15) Hygiene

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and Sanitation (two periods); (16) Aviation and Aviation Medicine; (17) Evacuation of Sick and Wounded in War; (18) Medical Department Field Records; (19) Functions of Command and Staff; (20) Budget and Finance; (21) Military Law; Mobilization Plans; (22) Industrial Mobilization; and (23) Medical Aspects of Mobilization.

As an example of the day's schedule, the program for July 16 is presented.

- 6:00- 6:15—Calisthenics.
- 6:30- 7:30—Breakfast.
- 7:30- 8:20—Conference: Evacuation of Sick and Wounded in War.
- 8:30- 9:15—Drill.
- 9:30-10:30—Conference: Hygiene and Sanitation.
- 10:40-11:45—Conference: Medical Department Field Records.
- 12:00- 1:00—Dinner.
- 1:00- 3:30—Organizational Training.
- 3:45- 5:45—Recreation.
- 6:00- 7:00—Supper.

Schedules for the other days were arranged similarly, covering the various subjects given above. It will be noted that during the morning hours general medical subjects were considered, in the afternoon hours (Organizational Training) subjects pertaining to the unit concerned were taken up (for example on this day our general hospital unit discussed "Organization of a Surgical Service").

The conferences were entirely informal. Each officer was allotted a subject in advance, together with appropriate texts and references. He then worked up his subject and presented it at the scheduled hour. General discussion by the members of the unit followed. The regular army medical staff acted as supervising instructors by aiding the officers in every possible way in the presentation of the subjects.

Drill was conducted by Lieut.-Colonel Bernard Lentz, Inf. Instead of being the drudgery that many found it to be during the war, it was a pleasure to which most of us looked forward each morning. Colonel Lentz's compelling leadership and ready wit made it more of a sport than arduous physical exercise. The first morning it was about as tiring as playing one hole of golf. At the end of two weeks, it became as exhausting as playing four or five holes of golf.

The mess was excellent, good food well prepared, and plenty of it; the last named quality was much appreciated, to judge from the appetites displayed.

Between three and four o'clock the day's work was ended, leaving ample time for golf, swimming, visiting the cities (only five miles away), and other recreations. There is a nine-hole golf course on the post; guest cards were available at many of the country clubs nearby. During the week-end recess, from Saturday noon to Monday morning, a number of the officers took fishing trips to some of Minnesota's numerous lakes.

Occasionally there were changes in the regular schedule as outlined above. One morning a demonstration of methods of evacuation was given by the students of the R. O. T. C. On a nearby series of hills, field hospital, aid stations, etc., had been set up, and a practical demonstration was given of the principles of war time evacuation. One afternoon we gathered in the open air amphitheatre to hear an address by General Summerall, the Chief of Staff of the Army. On the same day we were also pleased to have the opportunity of meeting Colonel C. J. Manly, M. C., Surgeon of the Sixth Corps Area. (Colonel Manly has recently finished his tour of duty in Chicago; his successor is Colonel J. L. Shepard, M. C.) On the final afternoon the "troops" were reviewed by Colonel Sweeney, the Post Commander.

In short, the work was so well arranged and so diversified that the course of instruction was profitable and interesting from beginning to end. It is felt that great credit is due to Colonel Skinner and Lieutenant-Colonel Hart, whose careful planning, willing coöperation, and unfailing courtesy were such as to ensure the unqualified success of any camp that they might conduct.

The material advantages of attending camp were manifold. First of all, the actual instruction received in current army medical methods; second, one hundred hours credit earned toward promotion; third, two weeks spent under healthful surroundings with ample opportunities for recreation; fourth, the numerous personal contacts made with a splendid group of fellow reserve officers from all over the middle west; and, finally, one must not forget that there is no financial loss. Full pay for fourteen days is received; even the junior offi-

cers found that they could pay for their initial outfits and mess bill, and still have some money left over.

While the above observations refer to the writer's experience at the Fort Snelling camp, similar reports have been received from reserve officers who attended camps at Custer, Grayling, and elsewhere. If you are contemplating two weeks' active duty this summer, it is advisable to put in your application early, as the number sent is restricted by the appropriations available, and

vacancies are usually filled well in advance of the date of the camp.

Reserve officers from Michigan who attended the camp at Fort Snelling, July 7-20, 1929, were: Colonels G. C. Penberthy, H. R. Carstens; Lieutenant-Colonels A. E. Harris, M. H. Deffenbaugh, E. P. W. Richter; First Lieutenants G. S. Bates, F. H. Top, E. G. Walker, P. C. Gittins, all Med.-Res.; First Lieutenant George Carlson, Dent.-Res.; Second Lieutenants C. G. Cates, H. Morris, E. L. Veasey, MA-Res.

PROPHYLAXIS AND TREATMENT OF LOBAR PNEUMONIA*

D. W. FENTON, M.D.†
READING, MICHIGAN

The Medical Science of today is made up of the experiments and experiences of men in all the ages of the past. Little by little at first but with ever increasing speed and with astonishing rapidity during the past fifty years was the sum total of human knowledge in the healing art built up. The reasons for the rapid evolution of medical science during the last century and more especially the last half century, are many; among which, perhaps the greatest, is the substitution of experiment and correct observation and recording of actual facts, for mere theorizing and the attempt to make facts fit the theory; in other words, the substitution of the inductive for the deductive method of investigation of facts at our disposal. Along with this change have come the enormous advances in the cognate sciences to medicine, chemistry, physics and the wonderful revelation of instruments of precision; the microscope, the X-ray and hundreds of others have had a wonderful part in presenting and recording the facts of science. To this knowledge every man who has worked in this fascinating field for no more than a year must add some knowledge that he should pass on to his colleagues.

So, while I have nothing new to present to those who have kept in touch with the literature of the day, the experience that I have had must be my excuse for this brief paper. During the more than half century which I have spent in the practice of medicine, I have seen many new theories of the

etiology and treatment of pneumonia brought to the front, most of them only to be thrown into the discard, and a broad view of the situation would not indicate that we have made any phenomenal advance in the prophylaxis or treatment of this treacherous and dangerous disease as a whole. It still kills more people than tuberculosis; chiefly because tuberculosis has been largely brought under control and its toll of deaths cut off by more than half. No such triumph can be claimed in the case of pneumonia. We know, it is true, that it is a communicable disease and that we can, by cleanliness and strict hygiene, prevent whole families from being prostrated by it as we used to see them fifty years ago. It attacks all ages and conditions of life, from the infant in arms to the gray-haired grandparents. It is apparently just as apt to attack the strong and vigorous man who has not been near a case of pneumonia, as anyone else. It is especially prone to become prevalent during or after a cold wave in winter; yet it may occur in the hottest weather in summer. I well remember one case many years ago in which the excessive heat, apparently, was the reason for the fatal issue. We simply

*Read at the regular meeting of the Hillsdale County Medical Society, March 25, 1930.

†Dr. D. W. Fenton, Reading, Michigan, graduated from the Detroit College of Medicine in the class of 1876, and has been in general practice ever since. Dr. Fenton writes us that he is eighty-one years of age, and that he has "no hospital connection except sporadically." The doctor is secretary of Hillsdale County Medical Society. The Journal M. S. M. S. congratulates the doctor upon his long and useful career and extends a welcome to him as a contributor to its pages.

could not keep the patient comfortable by any means in our power at that time.

The older writers gave their principal attention to the marked changes that take place in the substance of the lung; the pronounced congestion and stasis of blood followed by an exudate that blocks up the air cells, in a whole lobe or a whole lung. But today, we look behind all this and realize that this inflammation is but the local manifestation of the sinister work of a certain bacillus, the pneumococcus. Also that other micro-organisms come to the aid of the cocculus and add their evil work to the mischief begun by the pneumococcus. We know also, that the pneumococcus circulates in the blood stream and in some cases rapidly affects the heart. In fact, in my experience it is always the heart that gives out first. Rarely do patients die of insufficiency of active air cells except in double pneumonia.

What, then, is our duty in a case of beginning or even threatened pneumonia? Is there any drug or agency that combats this dangerous and so often fatal disease? Well, first, we must put the patient in a condition to enable him to bring all his natural powers of defense into play. That is, he should, if possible, be in a large, well-lighted, well-ventilated room, giving him an abundance of fresh air that can be warmed at first, to the point where he will have no chilling to drive the blood from the surface inward upon the already engorged lung and laboring heart. If the lung is largely blocked up, or if the heart is already failing, he may soon be calling for more and cooler air; which he should have, by means of windows opened in such manner that they do not blow directly upon him, the air being kept in motion by an electric fan. Oxygen may be added to the air, if needed, as it can always be procured at a few hours notice from any of our great supply houses or jobbers. On the other hand, it is not good practice to place a patient who is suffering from the chill and pain of oncoming pneumonia, where the cold air of winter may play over him. At this stage of his malady, he needs warmth to his surface and many good practitioners urge the constant and persistent application of hot fomentations to the chest to keep the sluggish blood moving in the congested lung and aid the already over-taxed heart. My own custom, however, has been to use, as an outward application, the cotton batting jacket, cut

like a vest and covering the whole chest. Another essential, is *absolute rest*.

In the earlier stages of the attack, pleurisy may cause intense pain, greatly increased by coughing. Here morphine, or, better, codeine, may be used, preferably by hypodermic. Opiates however, except for the relief of severe pain or cough, usually at the outset of the attack, should not be used because of their depressing effect on the respiratory center.

But what of prophylaxis? In my opinion in all cases of threatened pneumonia, moderate doses of quinine should be administered. Why? First, because we know that it acts as a powerful germicide in the blood, capable of killing the malarial plasmodium. There is no reason why it may not aid in the destruction or at least inhibition of the action of the pneumococcus; while it certainly is an active tonic and in full doses is capable of markedly reducing temperature. But I wish especially to call attention to the action of one drug that we hear little about in recent literature and that is *creosote carbonate*. In my own experience, this agent has seemed to be almost as specific in pneumonia as quinine is in malaria. Why? Dr. Thomson of New York in his classical work "Clinical Medicine" attributes this effect to the extreme sensitiveness of the pneumococcus to *creosote* in any form. At any rate, it has been my experience, for many years, that it has a wonderful effect in combating the disease; often arresting it in the earlier stages, and controlling it later. But it must be given in adequate doses. My own custom is to begin its administration in capsules, size No. 0 (or No. 00 in a large person), filling the main part of the capsule with a dropper and sealing the capsule by drawing a tooth-pick, dipped in water, around the edge of the cap, which will effectively seal the capsule so that the filled capsules may be transported anywhere. This will give about 9 grains in the No. 0 Capsule or 10 grains in the No. 00. These can be given every four hours with plenty of water, are non-toxic and in my experience, are non-irritating to the stomach. In case of children or those who cannot readily swallow a capsule, it can be given as an emulsion with Lilly's coco-quinine after thorough shaking, of course, in appropriate doses. This gives us the tonic and germicidal effect of the quinine along with that of the creosote carbonate.

Of late, it is my custom to begin this form of treatment at once when there seem to be premonitory symptoms of pneumonia, and continue until it is aborted or has gone on to the crisis.

Close watch should be kept on the heart and at the first symptoms of weakness, cardiac tonics, digitalis, strophanthus, caffeine or lily of the valley in reliable form, should be administered. In drinkers, alcohol should be used in moderate doses, taking care not to push it to the extent of getting its depressing effect. Ammonium carbonate in the form of the aromatic spirits is most useful and squill in small doses for its tonic effect on the heart and its expectorant effect, is very useful. Cough in the later stages is best controlled by such mild sedatives as hyoscyamus rather than the opiates.

Diet in the late periods of the disease should be nourishing but light and easily digested, as—toast, custard, omelet, ice-cream, or, if desired, a little broiled steak or fish. Also, the various cereal foods and oranges or grapefruit if desired. I have had no experience with the various vaccines and serums, but even if they were used I should not neglect the above line of treatment which has often, in my hands, seemed to arrest oncoming pneumonia and to save the day in seemingly hopeless cases. Of course, the function of the bowels must be kept up and the kidneys flushed by an abundance of liquids, especially milk. As one form of prophylaxis, the treatment by the creosote carbonate seems to be indicated as soon as signs of impending pneumonia appear; not waiting for it to develop, thus often forestalling the onset of the disease in its incipency. Later, in fully developed pneumonia, every effort must be put forth to sustain the powers of life until the crisis, if in a young person. Digitalis, aromatic spirits of ammonia, caffeine, even oxygen, if there is cyanosis; every effort to hold the failing strength, which is, after all, the failing heart. While the heart carries on, fairly well, the general circulation, there is hope; even if a whole lung is hepatized, we may still win the day and pull the patient back from the very shadow of death.

It is astonishing how, by careful treatment and attention, we sometimes win out after seemingly all hope is gone. Clear in my mind is the case of a frail man of 60, though in appearance he was nearer 70,

which I have no doubt indicated his real power of resistance. One lung was completely blocked; and he was unconscious, so completely was he overcome by the poison of the pneumococcus. I was fortunate in having with me a trained nurse, and a good one; who had been the heroine of many a battle with death. The patient's respiration was bad, though fortunately his pulse remained surprisingly good.

The nurse said, "It is useless to torture the poor old man with medicine or food. See! There is the Cheyne-Stokes respiration—a fatal symptom!"

"Yes," I said, "I see, but his pulse is still pretty good. I have never seen a patient die with a pulse like that. Let us hang on to him for a few hours longer at least." "All right," said she, "I am game, if you are." So, she remained at his side another night, continued the nourishment, which he took automatically, and the treatment. And to her delight and mine, when daylight came, he was conscious and the Cheyne-Stokes respiration had disappeared to return no more. He went on to a slow but uninterrupted recovery, and lived for years afterward.

The above case shows how, even in the aged, we may sometimes snatch victory from apparently certain defeat.

The foregoing is not intended to discredit any of the more recent advances in the treatment of pneumonia. By all means let us have all that observation and the best experimentation can give us. But *it is a plea* not to neglect a form of treatment of known value, that can, so far as we know, be used along with any other therapeutic plan.

Oxygen should not be neglected if cyanosis appears, or difficulty of respiration complained of. It may be used with the tent, or direct from the tank by means of an inhaler. All the resources at our *command* should be employed; because if the patient survives the crisis, especially if he be young, the tendency is to recovery, if the powers of life are not too far exhausted.

Much of what I have suggested will be almost a matter of routine in a modern hospital. But unfortunately, many of our cases will be debarred from hospital advantages by reason of being too ill to be moved when *complete rest is one of the prime essentials*; or by financial reasons. We must treat them when and where we find them, in the

lonely farmhouse, or the hovel of poverty, as well as in the homes of the well-to-do.

CONCLUSIONS

- I. In quinine, we have one valuable germicide with which to combat the pneumococcus in the blood stream.
- II. In creosote carbonate, we seem to have another, still more powerful, which can be used in all stages of the disease and is not toxic within ordinary limits.

III. This mode of treatment seems to arrest and abort pneumonia in the early stages and should be continued, unless in case of some opposing idiosyncrasy, throughout the course of the illness.

IV. Quinine and creosote carbonate seem to act as prophylactics. Therefore, it has been my custom more recently to use them at the first threat of an oncoming pneumonia.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M.D., Commissioner
LANSING, MICHIGAN

WANTED—A PHYSICIAN—A town of 500 population, we are without the services of a physician. Our nearest doctor is ten miles away and there are times when he cannot get here at all. We believe this is a good location. Can you tell us the name of some doctor who would be willing to come here?

WANTED—A LOCATION—I am a recent graduate of the medical school at — and am anxious to find a location. I will be willing to live in the country. Can you tell me the name of a town that is without a resident physician?

The mail bag of the State Department of Health frequently carries such an appeal from residents of towns in which no physicians are located and as frequently it will turn out a letter from a graduate of a medical school who wants a location for his new shingle. A survey of towns having no resident physicians was made in the State Department of Health office recently, as the sequel of another study.

One county seat, Atlanta in Montmorency County, is reported as being eighteen miles from a physician and the president of the village says that a visit by a physician costs a resident fifteen dollars. One hundred miles away in Baldwin, the county seat of Lake, the people pay a similar amount to be treated.

Posen, on the east coast, is isolated in a bleak section in which there are only thirty-seven doctors in nine counties. A thirty mile drive is necessary for the doctor in Alpena to reach Posen and a Posen resident, when he recovers from illness, must face the discouraging aftermath of a bill for forty dollars for each trip the doctor made.

In the southwestern half of Wexford County, twelve miles from the nearest physician and twenty miles from Cadillac, is the

village of Harrietta. Its population of two hundred twenty-six people is without medical care entirely when the roads are impassable, and under the best conditions wait from one to five hours for the doctor's car to cover the distance from Mesick to Harrietta. The president of the village comments on the lack of a resident doctor:

"It is my belief that this village and surrounding country would support a good physician. The trouble has been with a poor doctor coming in who has not had sufficient practice or knowledge for a general physician. Therefore they have to have another physician for certain cases and so they patronize the outside physician for all cases."

Arenac County, on Saginaw Bay, is directly north of the well-settled county of Bay. Here, however, begin the scattered settlements and sand flats of the north country. Five doctors are located in the southern half of Arenac County but the northern half of the county has no resident doctors. In this section, Turner and Twining are villages of two and three hundred people who must go from seven to ten miles for medical care.

Below is the list of villages in the state that are without resident physicians.

Town	County	Population (1920 Census)	Nearest Physician Miles
Ashley	Gratiot	596	14
Atlanta	Montmorency		18
Baldwin	Lake	471	12
Baroda	Berrien	223	5
Boardman	Kalkaska	311	10
Boyne Falls	Charlevoix	241	10
Clifford	Lapeer	327	8
Douglas	Allegan	305	2
Eagle	Clinton	100	5
East Lake	Manistee	675	5
Fountain	Mason	222	13
Freesoil	Mason	210	14
Fruitport	Ottawa and Muskegon	321	5
Gaastra	Iron	911	5
Galien	Berrien	460	6
Harrietta	Wexford	226	12
Lake Ann	Benzie	67	
McBride	Montcalm	220	
Mecosta	Mecosta	297	5

Millersburg	Presque Isle	243	10
Mineral Hills	Iron	384	3
Oakley	Saginaw	201	4
Otter Lake	Lapeer and Genesee	325	6
Owendale	Huron	274	6
Perrinton	Gratiot	419	2
Pierston	Montcalm	164	2
Posen	Presque Isle	190	30
Stanwood	Mecosta	273	10
Sterling	Arenac		6
Sylvan Lake	Oakland		
Turner	Arenac	236	10
Twining	Arenac	221	7
Vandalia	Cass	331	5
Westphalia	Clinton	325	8

E. D. J.

THE USE OF VITAL RECORDS

There has been an enormous increase in the number of requests received in the Bureau of Records and Statistics for certified copies of records of births, deaths, marriages and divorces for legal use. When the keeping of the records was transferred from the office of the Secretary of State to the Michigan Department of Health in 1921, one clerk spent from two to four hours a day on this work. It now requires the full time of two clerks, with additional assistance at frequent intervals.

Certified copies of records are furnished for many purposes, to prove age to vote, contract, hold office, marry, or secure a working permit, to prove right to inheritance, insurance, compensation, and pensions, and to prove citizenship for voting and passports.

W. J. V. D.

CHILD HYGIENE NOTES

The new study dealing with births survived by the mothers is progressing rapidly. Physicians in Ingham, Barry, Eaton, Cass, and Berrien counties have already been visited. It takes less time to secure the data than was necessary in the maternal mortality study.

Child Care classes are being conducted in Tuscola County by Bertha Cooper, R.N., of the staff of the Bureau of Child Hygiene and Public Health Nursing. Gratiot and Livingston Counties are also having child care class work, carried on by Julia Clock, R.N., and Nell Lemmer, R.N.

Esther Nash, R.N., and Charlotte Ludington, R.N., are in Calhoun County, assisting in the diphtheria immunization clinics.

A meeting of the State May Day Committee was held in the office of the Director of the Bureau of Child Hygiene and Public Health Nursing on March 12, 1930. Representatives of the following state organizations were present: Michigan Congress of Parents and Teachers, League of Women Voters, Child Study Association, Federated Women's Clubs, Michigan Division, American Association of University Women,

Michigan Tuberculosis Association, Women's Auxiliary, State Medical Society, and the Michigan Department of Health.

Plans were made for the activities which will mark May Day, 1930, as National Child Health Day.

L. R. S.

SMALLPOX

In view of the present interest in smallpox, the paper on "Smallpox" read by Major A. P. Hitchens, M.C., at the Ninth Annual Public Health Conference held in Lansing is especially interesting. We quote the summary of Major Hitchens' paper:

"1. Systematic vaccination has eradicated smallpox from the Philippine Islands.

"2. Before 1898 smallpox killed 40,000 of the Filipino peoples every year. During 15 years of American administration, the smallpox deaths were reduced to less than 1,000 a year.

"3. Then during a period of Filipino control of the government, vaccination was neglected. In about four years, the unvaccinated children began to fall victims of smallpox. In the next three years (1918, 1919, and 1920), 72,740 persons died of smallpox.

"4. In the third year of General Wood's administration (1924), there was but one 'indigenous' death from smallpox, and in the following year there were none at all. The fundamental reason for this was General Wood's frequent tours of inspection, personally checking up the work of health officers and vaccinators, especially in remote places likely to be neglected.

"5. Since smallpox has become so rare in the Philippines, and since many of the Filipinos are very susceptible to other exanthems, differential diagnosis is sometimes difficult. In puzzling cases Paul's rabbit cornea test may be helpful.

"6. The vaccine virus used in the Philippines is prepared in the Bureau of Science; it is a desiccated vaccine and maintains its potency for a long period even at tropical temperatures.

"7. In many laboratories, research upon the vaccine virus is producing interesting results. Using Noguchi's testicular method, Armstrong has produced a heat resistant strain of the virus; Nicolle is producing a bacterially sterile vaccine for practical use by propagating it in the brains of rabbits; certain workers are growing the vaccine in artificial culture. For practical use in the control of smallpox, the calf skin virus now

on the American market is a highly satisfactory product.

"8. The factors of a properly performed vaccination, in the order of their importance, are as follows:

- a. No shield or other covering strapped on;
- b. Leake's multiple pressure method for making the insertion;
- c. Cleanse the skin by gentle wiping with acetone;
- d. Vaccinate on the arm and not on the leg;
- e. Make primary vaccinations in the second six months of life.

9. Postvaccination tetanus tends to develop only in severe primary vaccinations, performed with large insertions, and dressed with some type of shield or covering strapped to the site.

"10. Postvaccinal encephalomyelitis, a disease new to medical science, has been reported as the cause of illness in 93 cases in England and 150 in Holland, with death rates of 50 and 35 per cent respectively. Even in Holland, where this disease has reached its greatest prevalence, there has been in children under one year of age but one case to 27,405 vaccinations.

"11. The evidence at hand indicates that the cause of postvaccinal encephalomyelitis is not in the vaccine virus. Its cause is at present unknown. 'Thus far the countries in which vaccination is widely resorted to in infancy have reported few and only sporadic cases of the postvaccinal nervous malady (Flexner).'

"12. A properly performed vaccination, using potent vaccine virus, always produces a 'take.' In an immune person the evolution of the lesion is accelerated.

"13. The history of smallpox and vaccination in the Philippines furnishes incontestable proof that vaccination prevents and can eradicate smallpox."

INDUSTRIAL HYGIENE NOTES

The information gathered in the industrial health survey being conducted by the Bureau of Industrial Hygiene is enlightening as to the rapid growth and the more exclusive nature of organized health work in industrial and mercantile establishments.

Officials in industries are beginning to realize the social and economic value of more complete preventive medical service in their establishments and there is an increasing willingness for coöperation on the part

of all concerned in putting such measures into practice.

While the surveys, inspections and conferences have reached only about 150 corporations, their range as to types and conditions gives a fairly good cross-section of the health service—medical and surgical—now being conducted in this field, and they afford much interesting and helpful data.

Some features of health service in which most notable progress has been made are:

Closer medical supervision, with less responsibility left to nurses for conducting the work in the plant first aid rooms; employees are being given more instruction on personal hygiene.

Physical examination of all workers on entering employment is a requirement given increasing emphasis, to facilitate proper placement and to check up on incipient ailments.

A better understanding of the function and value of visiting nurse service, that it should be under the supervision of a physician.

The attempt to establish closer coöperative relations with the family physician of the employees, and to urge attention to correctable defects.

Better means for early detection of tuberculosis are being provided and infected workers are being directed to the proper agencies for care.

Aid in rehabilitation of injured employees, officials coöperating with the government agencies on this effort.

F. A. P.

MOUTH HYGIENE ACTIVITIES

The activities of the Bureau of Mouth Hygiene for 1930 started with the Annual Public Health Conference at Lansing, January 8-10, which was very well attended and afforded excellent opportunity for conferences with public health workers.

The time from January 12 to 15 was spent in Chicago, attending the State Society Officers Conference, Midwinter meeting of the Chicago Dental Society and Conference of the Dental Health Education Committee of the American Dental Association.

January 18 the director addressed a Zone meeting of teachers and parents in Macomb County; January 21 groups in Central State Teachers College at Mt. Pleasant; January 22 Parochial and Public Schools in Mt. Pleasant and Mt. Pleasant P. T. A.; January 23 County Normal in Evart; Jan-

uary 25 the County School Officers of Lenawee County; and January 31 an all day discussion of mouth hygiene with a group of nurses and physicians in the Public Health Training Station in Lansing.

As the closing feature of this discussion the children in a school room on the edge of Lansing were examined and a physician remarked: "If you had talked about these things for six months I could not have realized their importance as it was brought out in this actual examination." This demonstration always impresses upon those present the almost unbelievable amount of chronic infection in the mouths of school children and the large number of teeth which look perfect but already have cavities which the mirror and explorer show up.

February 1 and 8 were again spent in zone teachers and parents' meetings in Macomb County. County School Commissioner Lee is so interested in public health that he has arranged to have all his teachers reached by lecturers from the State Department of Health.

The greater part of February and March has been taken up with lectures and demonstrations in County Normals in St. Johns, Ithaca, Mason, Charlotte, Howell, Bay City, Saginaw, Bad Axe, Caro, Lapeer, Big Rapids, Fremont, Hart, Ionia, Stanton, Flint, Pontiac, Jackson, Blissfield, Coldwater, Bridgman, Allegan and Marshall. In addition, the Bell Telephone Company employees in Detroit, Mothers' Club in Fremont, Olivet College Assembly, Alma Chamber of Commerce, Alma P. T. A., Belding P. T. A., and Pontiac Civitan Club were addressed.

Genuine interest and appreciation have been an almost universal experience and there is ample evidence that the seed being sown is becoming more fruitful each year.

W. R. D.

ENGINEERING NOTES

The state plumbing code is still in the hands of the committee, having been changed drastically since it was first drafted. From a more or less ideal set of minimum regulations in accordance with present day approved municipal practice, the code has become a simple list of requirements applicable directly to the localities not now covered by any type of plumbing supervision. In the mind of the committee, the same process of education of public opinion to an appreciation of the necessity of plumbing regulations will have to be carried on in the

small towns and rural subdivisions that has been accomplished in the cities.

Work is almost completed on the location of the line of the outfall sewer at the new state hospital for the insane near Saline. A topographical survey of the land has already been made.

The Kalamazoo State Hospital Colony is to have a sewage treatment plant. Plans have just been drawn up, specifications will be ready in a few days, and bids for the construction will probably be advertised for within the month.

The State Administrative Board has given its approval of the construction of a joint sewage treatment plant to care for the Traverse City State Hospital and Traverse City, and the project is to be voted upon at the spring election. If the city votes against the combination plan, the state will proceed alone.

The Michigan Home and Training School at Lapeer is to have extensive additions to the sewer system this summer. It is planned to construct one and one-half miles of sanitary sewers and two and one-half miles of storm sewers.

Negotiations are being carried on by the city of Flint and the board of the School for the Deaf at Flint looking toward connecting the sewers of the school system with the city system.

Plans are being prepared for new sewers and a sewage treatment plant at the Girls' Vocational School at Adrian.

Plans have also been started for a sewage disposal system at the Branch Prison at Marquette.

E. D. R.

HEALTH EDUCATION

The special program of lectures and demonstrations carried on in forty-nine of the fifty county normal training classes in the state will be completed in May. Five members of the Department staff have given the course, two from the Bureau of Education, two from the Bureau of Child Hygiene and Public Health Nursing, and one from the Bureau of Mouth Hygiene.

The series consisted of five lectures and accompanying demonstration work, each speaker spending at least two class periods in each normal school. The topics discussed included inspection of school children, control of communicable diseases in the schoolroom, personal and social hygiene, mouth hygiene, and methods and materials for teaching health to children. All the

material presented was selected with rural schools in mind, since the county normal training classes train rural school teachers.

A total of 1,103 students will have been included in the special course when it is finished. The work is given by the Department of Health to supplement the brief hygiene course already required by the Department of Public Instruction, and to aid in making clear the practical application of the principles of hygiene to actual school health problems.

M. D.

TRUTH ABOUT MEDICINE

NEW AND NON-OFFICIAL REMEDIES

Pneumococcus Antibody Solution, Types I, II and III Combined—Mulford. (New and Non-official Remedies, 1929, p. 346).—This product is also marketed in packages of four 50 c.c. double-ended vials with one complete intravenous outfit. H. K. Mulford Co., Philadelphia.

Squibb's Dextro-Vitavose.—A mixture of Squibb's vitavose (New and Non-official Remedies, 1929, p. 244), 1 part, and dextrose, 2 parts. E. R. Squibb & Sons, New York. (Jour. A. M. A., March 29, 1930, p. 920.)

Eli Lilly & Co.—Merthiolate Jelly, Lilly; Merthiolate Ointment, Lilly.

E. R. Squibb & Sons.—Squibb's Dextro-Vitavose. Frederick Stearns & Co.—Synephrin: Synephrin Solution "A"; Ampoules Synephrin-Procaïne, 3 c.c.; Hypodermic Tablets Synephrin-Procaïne.

PROPAGANDA FOR REFORM

Ephedrol with Ethylmorphine Hydrochloride gun cough mixture, relying on an opiate for its effect, and on the vogue of ephedrine for sales-appeal. The Council declared Ephedrol with Ethylmorphine Hydrochloride unacceptable for New and Non-official Remedies because it is an unscientific mixture marketed under an unacceptable proprietary name with unwarranted therapeutic claims. (Jour. A. M. A., March 1, 1930, p. 634.)

New Treatments for Cancer.—Hanson reports results closely resembling those described by Coffey and Humber, following the administration of thymus extract. Sokoloff reports similar results following the use of an extract of the suprarenal combined with iron. Charlton announces lytic effects on cancer cells following the administration of an extract of the omentum. The interest of the Coffey-Humber method, in its present stage of investigation, lies primarily in the fact that the available evidence seems to demonstrate a definite effect on cancer tissue as the result of injecting suprarenal extract into the body at points removed from the tumor. (Jour. A. M. A., March 1, 1930, p. 639.)

Causyth.—A number of German journals have contained more or less laudatory reports regarding Causyth, but these are not considered to present acceptable evidence for the value of the preparation. According to the advertising, Causyth is a "cyclohexatrienpyridinsulphonacid, derived from Pyrazol, the formula being $C_{22}H_{24}N_4O_6S$." The product has not been considered by the Council on Pharmacy and Chemistry nor has the Mallinckrodt Chemical Works, which exploits it by way of its Canadian

branch, "Mallinckrodt Chemical Works Limited of Canada," requested the Council to report on it. Apparently no reports have been published in American medical journals which are confirmatory of the German propaganda. A pharmacologist who has given much attention to the action of salicylates and other drugs used in the treatment of rheumatism reviewed seven of the eight papers which were referred to in an advertising circular. He held the evidence to be unsatisfactory and uncritical and no justification for the extravagant claims of the advertising. (Jour. A. M. A., March 1, 1930, p. 656.)

Pneumococcus Vaccines Omitted from N. N. R.—The Council on Pharmacy and Chemistry reports that increasing experience has failed to demonstrate the value of pneumococcus vaccine in the treatment of pneumonia, and the prophylactic value of the vaccine has not been conclusively proved. The Council came to the conclusion that the experience with this vaccine has not afforded acceptable evidence for its therapeutic usefulness and voted to omit it, with the accepted brands, from New and Non-official Remedies. In accordance with this action the Council announces the omission of *Pneumococcus Vaccine Immunizing* (Gilliland Laboratories, Inc.); *Pneumococcus Vaccine* (Lederle Antitoxin Laboratories); *Pneumococcus Vaccine, Prophylactic* (Eli Lilly & Co.); *Pneumococcus Antigen*—Lilly; *Pneumococcus Vaccine* (National Drug Company); *Pneumococcus Vaccine* (Four Types) (Parke, Davis & Co.); *Pneumococcus Immunogen* (Parke, Davis & Co.); *Pneumococcus Vaccine* (E. R. Squibb & Sons). (Jour. A. M. A., March 8, 1930, p. 716.)

ANNUAL MEETING OF THE COUNCIL ON PHARMACY AND CHEMISTRY

The Council on Pharmacy and Chemistry held its annual meeting at the Association headquarters March 7 and 8. Extended consideration was given to the work of the newly established Committee on Foods and the proposed publication of the book "Accepted Foods." The progress made appeared satisfactory and the work appears to be appreciated by the profession, the public and manufacturers. The Council discussed the status of the streptococcus preparations for the treatment of rheumatic fever made in accordance with the method of J. C. Small: it was the consensus that, while these products are suitable for controlled investigation by qualified experimental workers, propaganda which invites their general use is not justified at this time. The Council decided that the available evidence does not demonstrate the usefulness of puerperal fever streptococcus serum. The Council decided to continue the acceptance of Type I antipneumococcus serum for New and Non-official Remedies; that Type II serum is still in the experimental stage; and that pneumococcus serum preparations representing a mixture of Types I and II pneumococci be considered unacceptable. It was decided that, while adequate clinical evidence for the potency of a liver extract must be required before acceptance, further clinical testing will not be required after a product has been shown to be active and the method of preparation shown to be satisfactory. The Council considered the rules that are to govern the use of the seal to be used by manufacturers to identify products accepted for New and Non-official Remedies or for Accepted Foods. The Council approved a proposed study of commercial allergic protein preparations and offered coöperation. The Council considered a proposed manual for the guidance of hospitals to be prepared by a committee appointed by the Council on Medical Education and Hospitals with the coöperation of the Council on Pharmacy and Chemistry. Plans for the consolidation of various committees concerned with anesthesia were discussed. (Jour. A. M. A., March 22, 1930, p. 874.)

A. M. A. DETROIT CONVENTION CITY

ONE OF THE OLDEST CITIES IN MIDDLE WEST YET RECENT IN DEVELOPMENT.

THE MICHIGAN TERRITORIAL MEDICAL SOCIETY, FORERUNNER OF THE
MICHIGAN STATE MEDICAL SOCIETY—THE WAYNE COUNTY MEDICAL
SOCIETY—THE HOSPITALS—AN INDUSTRIAL CENTER

Within a few weeks Detroit will be the center of interest for this continent so far as the medical profession is concerned. The occasion of the Annual meeting of the American Medical Association which will be held in Detroit June 23-27 renders apropos a brief sketch of the city's history. Detroit was founded in 1701 by Antoine de La Mothe Cadillac. There is a bronze tablet on the wall of a one-story brick house probably five hundred years old in St. Nicholas de la Grave, France. The inscription of

Louis XIV the city of Detroit, then called Fort Ponchartrain, was founded."

This locality, namely the river front of Wayne County, has had a somewhat unique history inasmuch as it had been under three flags. The French occupied Detroit, giving the place its name, from 1701 to 1760. Then followed the British occupation from 1760 to 1796, when it passed into the hands of the Americans. It was subsequently in the hands of the British for a short time during 1812, when surrendered by General



THE MASONIC TEMPLE

Where all the activities in connection with the Annual Convention of the American Medical Association will be held.

the bronze tablet is to the memory of Cadillac, "Born in this house March 5th, 1658, colonizer of Canada and Louisiana and founder of Detroit where he died in 1830." Detroit is therefore two hundred and twenty-nine years old. Up to the time of the founding of what has since been the town and city of Detroit, the place was the location of a fort known as Fort Ponchartrain. On the western end of Cadillac Square stands a stone chair known as Cadillac's chair which bears the inscription, "On July 24th, 1701, under the patronage of

Hull, until retaken in Commodore Perry's victory over the British on Lake Erie in 1813. The territory immediately adjacent to Detroit was a sort of no man's land or neutral zone between the five nations Indians and the western tribes.

MICHIGAN TERRITORIAL MEDICAL SOCIETY

While Detroit's history goes back over two centuries and a quarter the first century and a half saw very little change in the topography of the place. From the medical viewpoint there was practically nothing in

organized medicine up to the year 1821, which was the date of the founding of the Michigan Territorial Medical Society, which was the forerunner of the Michigan State Medical Society. As the settlements were largely adjacent to the waterfront, De-

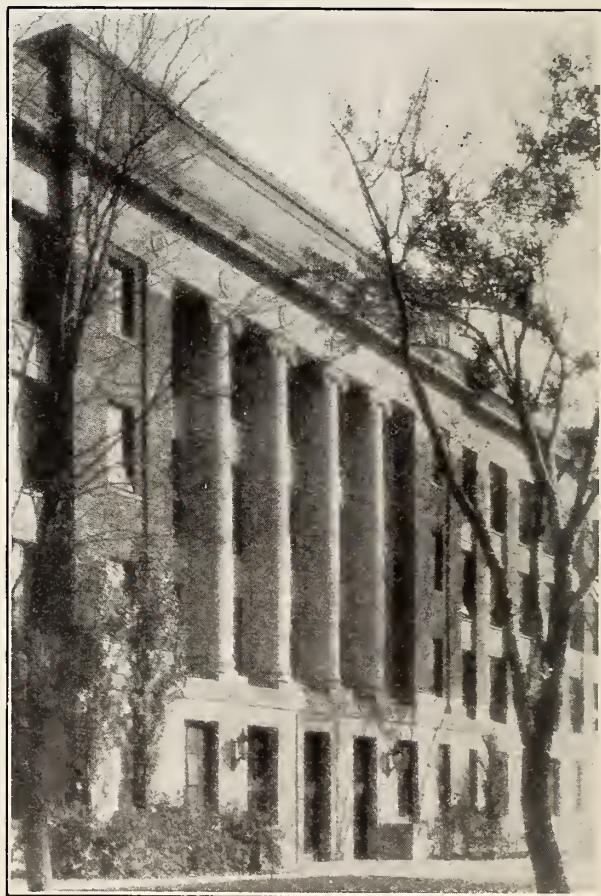
troit the city of Detroit took over the Detroit College of Medicine and Surgery, which has since been operated as a civic institution under the control of the Board of Education. The Detroit College of Medicine and Surgery is at the present time one of the units



THE NEW UNIVERSITY OF MICHIGAN HOSPITAL, ANN ARBOR
Showing the administration building in front.

troit was naturally the center of the Territorial Medical Society. And here for fuller description of the development of organized medicine and medical facilities of Michigan, the reader is referred to the forthcoming volumes on The History of Medicine in Michigan.

A movement was launched for the establishment of the Territorial or what has since become the State University in 1817. The University of Michigan, however, did not become an actual fact until 1837 and the medical department of the University not until 1850. Detroit also claims the initial State University, there being a tablet to that effect on the building occupied by Farrand, Williams and Clark on Bates St. The Detroit College of Medicine was first opened in 1869. The Detroit College of Medicine and the University of Michigan Medical School are the only two medical colleges in the state at the present time. It is interesting to note that Michigan has been a veritable graveyard for medical colleges, there having been no less than sixteen of these institutions within the past half century. Michigan was the pioneer in the matter of state medical education. The other colleges were all proprietary institutions. In 1918



EAST ENTRANCE, MEDICAL BUILDING

of Detroit's new system of college training which also embraces law and pharmacy as well as facilities for college training through to the degree of B.A.

THE WAYNE COUNTY MEDICAL SOCIETY

The Wayne County Medical Society, which is a branch of the Michigan State

ence and was followed in May, 1853, by an organization known as the Detroit Medical Society. This organization lasted until March, 1858. Between 1858 and 1866 there was no local medical society in Wayne County. In this latter year, however, on May 31 was organized the second Wayne



HERMAN KIEFER HOSPITAL
Showing the new building devoted to Tuberculosis, corner of Hamilton and Taylor Avenues.



HENRY FORD HOSPITAL
Located at the corner of Hamilton Avenue and West Grand Boulevard

Medical Society, had its beginning in 1846 with the organization of the "Sydenham" Society. This Society was disbanded in April, 1849, and reorganized into the Wayne County Medical Society. It was again disbanded in 1851 owing to the repeal of the laws under which it owed its exist-

County Medical Society. Its first President was Dr. Zina Pitcher, one of the nestors of early Michigan medicine. The Society continued until early in 1876, when it was indefinitely adjourned.

On August 21, 1876, however, the third Wayne County Medical Society was or-

ganized and incorporated under the laws of the State of Michigan with Dr. William Brodie as its President. Dr. Brodie was known among medical men all over the United States, he having been at one time

1876, and which conducted meetings under the designation Detroit Medical and Library Association and Detroit Medical Society.

In 1906 the constitution of the Wayne



PROVIDENCE HOSPITAL
West Grand Boulevard and Fourteenth Avenue.



THE WOMEN'S HOSPITAL

President of the American Medical Association. It is worth while to note that he was President of the Wayne County Medical Society for seven years.

In 1902 the Wayne County Medical Society took in a branch of the profession which had become separated from it in

County Medical Society was amended so as to make possible a Defense League as an integral part of the Society. This was a success from the beginning and met with favor with all members of the County Society. It was eventually (1910) taken over by the Michigan State Medical Society so that now

the Defense League of the Michigan State Medical Society extends its benefits to all members who may require its services.

years. In 1909 it was thought advisable to create a publication which would serve as a means of communication among members



HARPER HOSPITAL

Those familiar with the old Harper Hospital will scarcely recognize this picture. It is of the new addition and faces on Brush Street so that now Harper Hospital extends from John R. Street to Brush Street.



ST. MARY'S HOSPITAL
One of the oldest Hospitals in Detroit.

The Wayne County Medical Society published its first Bulletin in the year 1900, 1902 and 1903. The Bulletin then suspended publication for a period of about six

of the Society. The Wayne County Medical Society Bulletin witnessed a new birth and continues at the present time, a very creditable weekly publication of thirty pages

containing items of news, editorial matter and papers read at the various meetings of the Society.

In 1910 the Society, which had met in

and space for housing the medical library, made a satisfactory club house. The Society occupied these quarters until 1926, when club rooms were procured in the new



RECEIVING HOSPITAL
Corner of Clinton and St. Antoine with the main entrance on St. Antoine.



ST. JOSEPH'S MERCY HOSPITAL
Showing a portion of the new building to the left.

different auditoriums principally the Wayne County Building and on extraordinary occasions at the old Art Institute on Jefferson Avenue, elected a Board of Trustees and authorized them to purchase a permanent home for the Society which consisted of a large residence at 65 High St., Detroit, where additions in the way of auditorium

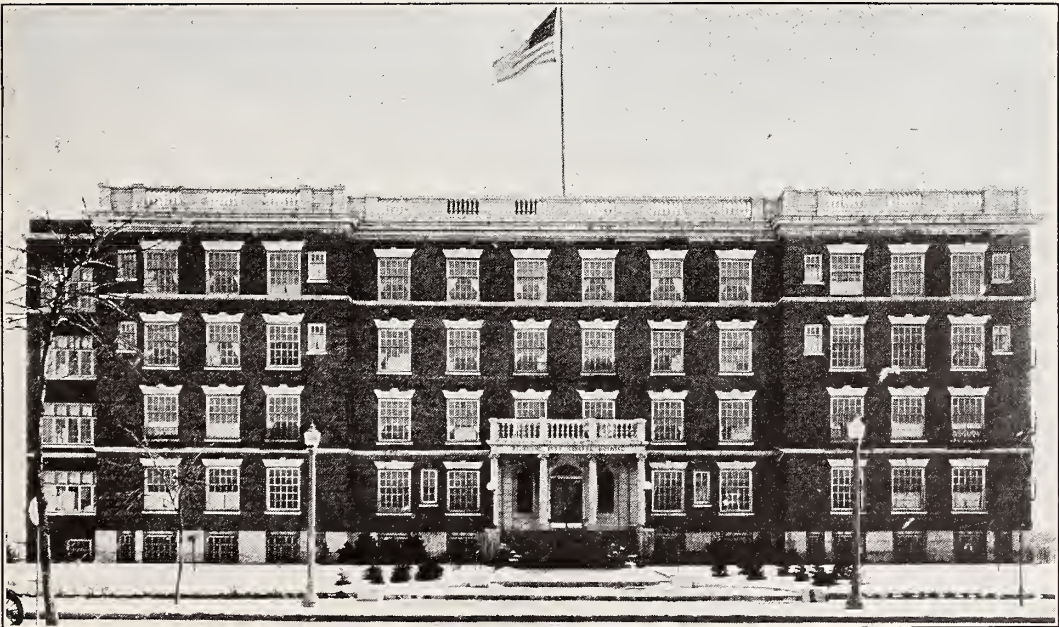
Maccabees building, Woodward Ave. and Putnam, with the use of the large auditorium which is capable of accommodating 750 persons. At present the meetings of the Society are held on Tuesday evenings, one meeting each month being devoted to the surgical section and one to the medical section and two as general meetings.

Any account of the Wayne County Medical Society would be incomplete were the Beaumont Lectureship Foundation omitted. In 1921-22 the Beaumont Founda-

mont in honor of the famous backwoods physiologist whose pioneer work on gastric digestion began at Mackinac Island, Michigan, in 1822. In 1924 Dr. William E.



THE GRACE HOSPITAL
Located on John R. Street



HIGHLAND PARK GENERAL HOSPITAL

tion was established for the purpose of giving instruction in the medical sciences, particularly on those subjects basic to medicine and surgery. The funds for carrying on this work were obtained from the surplus contributions then in the hands of the patriotic committee of the Society. The Foundation was given the name of Beau-

Blodgett of the Wayne County Medical Society gave the sum of \$5,000 for the establishment of the Detroit Orthopedic Lecture Foundation. Both the Orthopedic Lecture and Beaumont Lectures have come to be very popular with the members of the Society and other members of the Michigan State Medical Society who have availed

themselves of the standing invitation to attend these lectures each year.

With the vast increase in population which Detroit has witnessed the last quarter of a century, there has also been a marked influx of doctors, so that the Wayne County

only a little better than one quarter of a century of that time.

DETROIT'S POPULATION

A half a century ago the population of Detroit was 116,000; today it is estimated at approximately 1,800,000. Robert Mal-



EVANGELICAL DEACONESS HOSPITAL
3245 Jefferson Avenue

Medical Society is now the fifth largest on this continent.

The problem of hospital accommodation had been a pressing one, probably not more so, however, than that of providing accommodation for school children or hotels or other necessities. The city has done well to meet the stress occasioned by coming of large masses of population. It has been estimated that at times in a single year Detroit's population had advanced in numbers that would make an extra city the size of Flint or Grand Rapids. This circumstance has brought problems of administration in the way of transportation, of fire protection, police protection, public health and preventive medicine, sudden and increased demand for extension of public works. Thus the experience of Detroit has been somewhat phenomenal and it would be a wonder if from time to time mistakes had not been made. However, with its history extending back two-hundred and twenty-nine years the expansion of Detroit has been a feature of

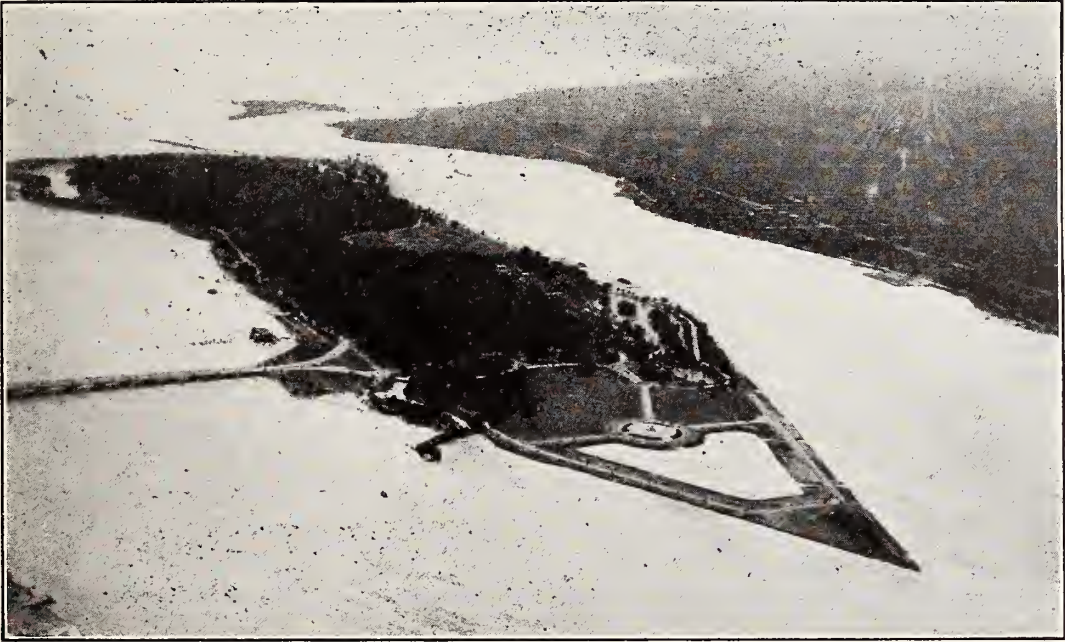
thus, the British political theorist, is the author of the so-called Malthusian theory of population, which is to the effect that barring such counterchecks as limitation of food supply, as disease and exposure, and as unsanitary and temperature conditions, the population of the country tends to double itself every twenty-five years. With all these checks to increase in population the census of Detroit shows an increase which the Malthusian doctrine could never have anticipated. Detroit has a polyglot population embracing in 1925 no less than thirty-five different nationalities with many languages and dialects.

Even before the advent of the automobile, Detroit had become a world-wide center for such manufactured articles as drugs and other commodities. With the advent of the development of the automobile, no city in the world has shown such marked commercial and industrial advancement. Evidences of this are to be seen on every hand: the tall skyscrapers, the erection of splendid

hotels which now adequately care for visitors to Detroit not only on business but in attendance on the various conventions held every year, for Detroit has come to be recognized as one of the leading convention cities of the United States.

The enormous increase in population has

given rise to the problem of caring for the rising generation. The city has at present 234 public schools, 13 private and 121 parochial schools. There are 7,199 public school teachers and 371,902 children of school age. The annual appropriation for education is over twenty-five million dollars.



AEROPLANE VIEW OF BELLE ISLE

Detroit's nationally known playground. The Canadian shore is seen in the right distance.

REPORTS STUDIES ON EPIDEMIC INFLUENZA

In spite of considerable effort to find the causal agent of epidemic influenza, the present time finds the problem still unsolved. Dr. Peter K. Olitsky of the Rockefeller Institute for Medical Research said in a De LaMar lecture which he gave at the Johns Hopkins School of Hygiene and Public Health.

There are several factors which contribute to the existing confusion and the outstanding difficulty arises from the necessity of selecting cases of undoubted acute influenza, Dr. Olitsky stated. There has been in the past frequent failure to recognize influenza as a specific, primary disease, and therefore physicians and other scientists have failed frequently to consider as secondary infections the various bacterial pneumonias that develop in lungs injured by the influenzal agent.

Moreover the primary uncomplicated disease is usually mild and transitory; so that unless the cause is sought in the early hours it may become masked or even supplanted by associated organisms. Also, the rapid and extensive spread of influenza during pandemics makes it difficult to select for control observation cases of perfectly healthy individuals who have never suffered from the disease. Finally, to add to the confusion, a clear clinical distinction has not always been made between primary, uncomplicated epidemic influenza and many different types of upper respiratory infections, such as common colds, acute rhinitis, acute bronchitis and other indefinite conditions which may simulate a true influenzal attack.

Dr. Olitsky discussed three different agents which

have been thought to cause influenza. Pfeiffer's bacilli have not yet been universally accepted as the causative agent, although there is considerable evidence to show that these organisms have some relationship to the cause of the disease, Dr. Olitsky said. The same holds true for streptococci which have been implicated by several investigators since 1917, and most recently by Dr. I. S. Falk, formerly of the University of Chicago.

Some investigators believe that the cause of influenza is a filterable virus free from bacteria of the ordinary species, or bacteria which can be cultivated artificially. Here again additional experimental evidence is necessary before a conclusion may be reached.

Dr. Olitsky and his colleague, Dr. F. L. Gates, have been studying the *Bacterium pneumosintes*. These are filter-passing bacteria found in the nasopharynx of man. There are now reported in the literature at least 30 groups of pneumosintes-like organisms mostly isolated by Drs. Olitsky and Gates and by workers studying in their laboratories. Dr. Olitsky drew attention to the fact that this germ was obtained only from cases of influenza. While there has been confirmation now and again of occurrence of this filter-passing organism in influenza and not in other conditions, Dr. Olitsky said that he and Dr. Gates still maintain the cautious attitude they have previously expressed and prefer merely to present the experimental facts.

In conclusion, Dr. Olitsky is of the opinion that in view of the many workers engaged on the problem, it is likely that all obstacles will be overcome and an exact knowledge of the cause of the disease will be attained.—Science Service.

OF GENERAL MEDICAL AND SURGICAL INTEREST

OTITIS MEDIA AND DISEASE OF MASTOID

During the last two years, nine cases have been observed by Harold I. Lillie, Rochester, Minn., in which early involvements of the blood stream from otitic and mastoid disease have been treated by surgical measures that were relatively conservative considering the gravity of the circumstances and the otologic tradition relating to the management of such cases. During the same period, it was necessary to ablate the sinus and section the vein in six other cases that presented a quite different pathologic process. It would seem that whether or not the sinus is to be ablated and the jugular vein tied in cases in which the infection of the blood originates in the temporal bone at the time of the original mastoid operation will depend on the type of disease, the general condition of the patient, the pathologic process encountered and the judgment of the surgeon. It is not to be inferred that early mastoid operation is indicated in all cases of otitis media and mastoiditis. It is suggested, however, that in early well chosen cases early complete mastoid operation in the course of the infection of the blood stream from the disease will take care of the disease in a satisfactory manner.—Journal A. M. A.

DIVERTICULA OF STOMACH

Joseph C. Bell, Louisville, Ky., and Ross Golden, New York, give a brief discussion of the condition itself and a report of four cases. In summarizing they assert that gastric diverticula are rare and are seen most commonly in the region of the cardiac orifice. The etiology of this condition is still an unsettled question. Diverticula of the cardiac region are frequently symptomless and in themselves seldom justify surgical intervention. Those in other parts of the stomach often call for surgical treatment. The roentgen observations, in most cases, are characteristic, and in many instances the diagnosis is made by this means.—Journal A. M. A.

INFECTION OF ACCESSORY SINUSES AND UPPER RESPIRATORY TRACT IN VITAMIN A DEFICIENCY

Burt R. Shurly and R. G. Turner, Detroit, report on a study of infection of the accessory sinuses and upper respiratory tract in vitamin A deficiency. They conclude that organisms isolated from the suppurations of the upper respiratory tract and middle ear in albino rats suffering from lack of vitamin A, morphologically appearing as gram-negative cocci and classified as such by their fermentative powers, may produce a fatal toxemia in rabbits. From the observations made it appears that the poisonous effect is produced by an endotoxin and not by a toxic substance secreted by the organism. The toxicity of gram-positive organisms (*Staphylococcus aureus*) compares favorably with the toxicity of known

strains of *Staphylococcus aureus*. Organisms classified as Friedländer-like, other than indole-producing strains, appear to be avirulent.—Journal A. M. A.

THE PORTER ANTINARCOTIC BILLS

In THE JOURNAL, February 8, the leading editorial concerned the Porter antinarcotic bills and called on the medical profession to oppose this legislation for numerous reasons. February 14, Congressman Porter caused to be published in the *Congressional Record*, and issued to the Hearst newspapers, and apparently to these newspapers alone, a reply to this editorial. The reply was received in the headquarters office of the American Medical Association, February 17. The wide publication it has already had makes unnecessary a repetition in our columns. It offers nothing new in evidence or argument to cause any change in the point of view expressed in our original editorial. THE JOURNAL still feels that all the power the medical profession can wield must be mustered to the defense of the right of physicians to practice medicine without further bureaucratic molestation.—Journal A. M. A.

ANOTHER NAME ADDED TO ROLL OF MEDICAL MARTYRS

When Harry B. Anderson, employee of the U. S. Public Health Service Hygienic Laboratory, died a victim of parrot fever he added one more name to the illustrious roll of medical martyrs who have given their lives in the struggle to free mankind from disease.

Yellow fever, Malta fever, bubonic plague, Rocky Mountain spotted fever and now parrot fever have claimed among their countless victims those brave fighters who willingly gambled with death in their earnest search for the deadly little germs of disease.

Yellow fever has perhaps taken the greatest toll of medical research workers, beginning with Jesse W. Lazear and ending with Hideyo Noguchi, Adrian Stokes and William A. Young. These men all died of the dread disease contracted in the course of their investigations.

Rocky Mountain spotted fever claimed the lives of Thomas B. McClintic and A. Leroy Kerlee.

Bubonic plague, the very mention of which makes men shudder, killed Alexandre Yersin and Hermann Franz Muller, who were conducting important investigations on this disease.

Tito Carbone and Allen Macfayden died of Malta fever, which is also now known as undulant fever, and which has attacked another U. S. Hygienic Laboratory worker, Miss Alice Evans, who fortunately escaped the fate of these other scientists.

Other prominent names in the list of medical martyrs are those of J. Everett Dutton, who died of African relapsing fever; Howard Taylor Ricketts, who died of tabardillo or Mexican typhus fever; and Daniel A. Carrion, who died of verrugas.

Even now, the fate of another parrot fever victim trembles in the balance. Dr. William Royal Stokes of the Baltimore City Health Department is fighting in a hospital bed the disease which he had been fighting in his laboratory a short while ago. Serum, made from the blood of patients who had recovered from parrot fever, has been administered, but whether he will win his battle cannot yet be told. His colleague, Dr. Daniel S. Hatfield, is also suffering from the disease, and Dr. Charles Armstrong, of the U. S. Hygienic Laboratory, is thought to have it but their condition is not so grave as that of Dr. Stokes.—Science Service.

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Michigan State Medical Society

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Contributors are responsible for all statements, conclusions and methods in presenting their subjects. Their views may or may not be in agreement with those of the editor. The aim, however, is to allow authors as great latitude as the general policy of The Journal and the demands on its space may permit. The right to reduce in length or to reject any article is reserved. Articles are accepted for publication on condition that they are contributed solely to this Journal.

All communications regarding advertising and subscriptions should be addressed to F. C. Warnshuis, M.D., Suite 1508 Grand Rapids National Bank Bldg., Grand Rapids, Michigan.

MAY, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

THE A. M. A. MEETING

The date of the annual meeting of the American Medical Association in Detroit is only a few weeks away. For several reasons this bids well to be the largest assembly of the profession in years. The central location of the city makes it easily accessible for members and visitors, not only from all over the United States but from Ontario as well. The splendidly paved roads leading to Detroit from all points of the compass will dispose large numbers to come by automobile. Special arrangements have been made so that many may avail themselves of the advantage of travel by aeroplane.

No other city on the continent is better equipped to accommodate a large gathering. Detroit Hotel accommodation is ample without crowding and the Masonic Temple

is sufficiently spacious to take care of all scientific meetings as well as scientific and commercial exhibits.

The local committee on arrangements has spared no efforts in the endeavor to provide entertainment for the visiting members and their wives. The medical profession of Wayne County and of the State of Michigan are the hosts. Let each member of these organizations feel that it is a personal individual duty to see that nothing is omitted that will conduce to the comfort and entertainment of our guests.

MICHIGAN'S MEDICAL HISTORY

Every physician in the State will want a set of this two volume work when published. We take this for granted. The first volume will be ready shortly and the second will follow before the end of the summer. Subscription blanks have been mailed to each member. It will assist the publication and distribution of the work if those receiving these blanks will fill them out and mail them together with the check for \$5.00 (there is no objection to making the check for \$10.00, which will pay for the two volumes) to the Secretary of the Michigan State Medical Society.

The Committee on Publication of the Society will greatly appreciate such action on your part.

POST-GRADUATE MEDICINE

The March and April numbers of the Journal carried the announcement of the Post-Graduate courses in medicine and surgery and allied subjects given by the Department of Post-Graduate Medicine of the University of Michigan in affiliation with the Michigan State Medical Society. Intensive courses of three weeks duration will be given beginning on June 2, 1930. These courses will be given at the Receiving, Harper, Grace, Herman Kiefer, St. Mary's and Children's Hospitals in Detroit. The registration last June, when the first Post-Graduate program was carried out, was much larger than anticipated, with the encouraging feature that practically all registrants put in a full attendance.

Brief but intensive courses will be given at the University Hospital in general laboratory methods with longer periods for those registering for work in serology. Six courses are offered at the University, one elementary and five for those who have had

previous training in Roentgenology.

Post-Graduate work in pediatrics will not be undertaken until October, when intensive courses five days in duration will begin the first of the month and the first week of each month following. These courses, as those know who availed themselves of the opportunity last year, are so arranged as to give practical instruction in the newer phases of the various subjects.

APPENDICITIS*

Wilkie, Professor of Surgery, Edinburgh University, notes two primary acute pathological conditions affecting the appendix, namely, the acute inflammation of its wall and the sudden obstruction of the appendiceal lumen. The former has its analogue in the inflammation of the tonsil. Both appendiceal wall and tonsil are richly supplied with lymphoid tissue. Such attacks would be relatively harmless, were it not that the fibrosis resulting from the resolution stage produces a localized constriction of the lumen of the appendix. If this constriction is near the cecal end of the appendix it follows that there is interference with the normal entry and exit of fecal matter with the result that one or more fecal concretions may form. Thus the appendix is left in a condition favorable to acute appendiceal obstruction.

Regarding acute appendicular obstruction Wilkie says: "This disease is almost invariably associated with the presence of a concretion in the lumen of the appendix, which concretion suddenly becomes impacted, either in a stenosed area, the legacy of a previous appendicitis, or at a kink due to a tacking down of some part of the appendix by a congenital fold. What happens when a concretion becomes thus impacted depends on the content of the appendix distally to the concretion at the moment of impaction. If there be any appreciable amount of fecal matter present, great tension develops as the result of putrefaction of this material, and the appendix undergoes tension gangrene, usually within twelve hours. Rupture results, and through the aperture stinking fecal content, swarming with bacteria, pours into the unprepared peritoneal cavity. A virulent and probably fatal peritonitis results."

The forerunner of this condition is frequently found in the process of gastro-intestinal examination by means of the X-rays. The presence of concretions gives the appendix a somewhat beaded appearance. Such cases are potentially dangerous if not the seat of actual pathology at the time of the examination.

Wilkie believes that infection of the wall

of the appendix is in many cases blood-borne, which is substantiated by the frequency that acute appendicitis has been found to follow tonsillitis.

HEREDITY

It is said that the poet Alfred Tennyson debated the matter of naming his eldest son after himself but concluded not to do so with a brooding, "Suppose he turned out to be a fool." Another prominent British peer comes forth with the declaration that the son of a clever man is as likely to be a fool as not.

Sir Francis Galton, a relative of Darwin and noted student of heredity and eugenics, claimed that the son of a judge had five hundred times the chance of success in life as an ordinary mortal. Galton based this opinion entirely on heredity and did not take into consideration such factors as education and social heredity or environment. There is a tendency to underestimate the advantages of good environment and cultural influences in their effects upon offspring and to emphasize unduly the spirit of the poet Henley:

"Who says that we shall pass, or the fame of us
fade and die,
While the living stars fulfill their round in the
living sky?
For the sires live in the sons and they pay their
fathers' debt,
And the lion has left a whelp wherever his claw
is set;
And the lion and his whelps, his whelps that none
shall brave,
Is but less strong than time and the great all
whelming grave."

COUNTING THE COST

It may be some satisfaction to the medical profession to know that the cost of medical care is not the only matter to be subject to investigation with a view to finding a remedy. A survey is being made by Johns Hopkins University Law Department into the high cost of law suits, legal advice and such matters. The Institute of Law at Johns Hopkins purposes carrying out the investigation more thoroughly than bar associations can spend the time to do. The preliminary findings, it is expected, will be reported in about a year's time. Probably before the investigators complete their work they will find it to be more time consuming than that of the Committee on the Cost of Medical Care. "The Law's delay" was felt as a patience-exhausting custom in Shakespeare's day.

*The Etiology of Acute Appendicular Disease. D. P. D. Wilkie, M.Ch., F.R.C.S., Edinburgh, Canadian Medical Association Journal. March, 1930.

However, if these investigations are carried far enough to include the high cost of living in general and if the outcome will be a general decline in the cost all round, doctors need not worry.

"A MEDICO-LEGAL COMMISSION"

There appeared in one of the Detroit newspapers a few weeks ago an announcement in the shape of what was evidently an advertisement to the effect that one of our State Representatives purposed introducing during the next session of the Michigan State Legislature a bill to create a "State Medico-Legal Commission" which will be empowered to require that all new advances of treatment and methods in the field of medicine be submitted to the Commission by any licensed practitioner in Michigan who may originate or perfect any such new advance or method, and that it would be the duty of this Commission to "investigate most rigidly and thoroughly the new advances and treatment methods and report to the people their findings. Then the article goes on to extol the merits of a method of treatment of a Detroit doctor. As the physician referred to in this announcement is not a member of the County or State Medical Society or the American Medical Association, we make no comment.

For the information of the Representative, however, as well as of any others who may be doubtful, we wish to say that every new method proposed in medicine or surgery is thoroughly tried out and passed upon by those most competent to evaluate its merits; that this custom has been in vogue throughout the civilized world for almost a century; that the medical profession contains its own severest and sanest critics; that as soon as any method of treatment proves itself as being of real value, the people at large become the beneficiaries and that without delay. Therefore we fail to see what useful function any such commission as that suggested could perform. In this regard we quote the splendid sentiment expressed by Adams Gowan White: "No scientific discovery is accepted until it has been checked again and again by investigators working with the most rigorous and vigorous skepticism. At the court of science every prisoner is suspected until proved innocent by a cloud of witnesses before an implacable bench of unemotional judges."

EDUCATION AND CRIME

Professor Meiklejohn of Wisconsin in a communication in a recent number of the New York Times contended that education is ineffectual as a means of curbing crime, yet the crook has been found generally an uneducated person. The mental age of the normal adult outside of prison is estimated to be several years beyond the average mental age of convicts. Dr. Meiklejohn deplores the fact that education has not succeeded in banishing poverty, servitude, ugliness or untruths.

We believe that on the whole education does improve the lot of mankind. But let us be clear. What is education? Or what is the mark of an educated man? For the vast majority who do not get beyond the elementary grades, education simply means the ability to read and to write, but principally to read. There are a great many who just know how to read but who are without a stock of ideas. They are educated enough to be accessible to the demagogue or the cheap politician but not educated sufficiently to withstand him; educated enough to be led by the sensational press but not enough to protect themselves against it. There are newspapers for those who can't think and we might go even farther and say that in the case of the tabloid and pictorial there are also newspapers for those who can't read. The ability to read, therefore, does not mean that one is educated. In defining education we may be a bit old fashioned but we think Huxley's definition has still much in its favor.

"Education," said Huxley, "is the instruction of the intellect in the laws of nature, under which name I include not merely things and their forces, but men and their ways; and the fashioning of the affections and of the will into an earnest and loving desire to move in harmony with those laws."

And again, "That man, I think, has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of

the great and fundamental truths of nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of nature or of art, to hate all vileness, and to respect others as himself."

This is a broad conception of education but everyone will admit that a person so "educated" would be capable of adjusting himself to any environment in which his lot may be cast. Crime is antisocial. It is due largely (not all, however) to the lack of ability to harmonize with society.

UNEMPLOYMENT

It is estimated that there are over four million unemployed workers in the United States at the present time. The actual number may be a great deal larger. The more highly developed society becomes, the more complicated and difficult of adjustment is its economics. It is painfully evident, however, that we in the United States have been living on the fat of the land with little regard for the future. This is seen in the wasteful exploitation of our natural resources. Our standard of living has included not only the so-called necessities of life, but we have come to look upon erstwhile luxuries as necessities. We have placed ourselves under financial obligations that mortgage our future earning power. When the time comes that the demand for certain articles such as automobiles, radios, iceless refrigerators and what not is satisfied and the saturation point has been reached, workers are laid off and the unemployment situation is felt not only by the immediate unfortunates, but by the merchants and others. And it goes without saying the medical profession feel the financial stress early.

Industrial statesmanship, which is sadly wanting, would have anticipated the possibility of unemployment when times were good, and some measures would have been undertaken at least to study the possible situation with a view to a remedy. We are far behind other countries in regard to looking to the interests of the less fortunate. Both Great Britain and Germany have made strenuous efforts towards the solution of the non-employment and old age problems.

We have no panacea to offer but feel that

governments might do more if membership in Congress or in the Senate were looked upon as a career requiring as much intelligence and special training as medicine or law. The election of members to Congress and other legislative positions has been of the most haphazard character and as a rule the political extrovert or the person for some reason, often other than personal fitness, who can command votes is successful at the polls.

Such subjects as unemployment, industrial statesmanship, directly concern us as members of the medical profession. We have a large share of the burden, the care of the indigent sick. The matter of preventive medicine which affects the whole nation is our concern, and beside it all, we are citizens.

YE PEDIATRICIANS, ATTENTION!

THE MODERN BABY

"The hand that rocks the cradle"—but there is no such hand.

It is bad to rock the baby, they would have us understand;

So the cradle's but a relic of the former foolish days,

When mothers reared their children in unscientific ways.

When they jounced them and they bounced them, these poor dwarfs of long ago—

The Washingtons and Jeffersons and Adamses, you know.

They warn us that the baby will possess a muddled brain

If we dandle him or rock him—we must carefully refrain;

He must lie in one position, never swayed and never swung,

Or his chance to grow to greatness will be blasted while he's young.

Ah! to think how they were ruined by their mothers long ago—

The Franklins and the Putnams and the Hamiltons, you know.

Then we must feed the baby by the schedule that is made,

And the food that he is given must be measured out or weighed.

He may bellow to inform us that he isn't satisfied, But he couldn't grow to greatness if his wants were all supplied.

Think how foolish nursing stunted those poor weaklings, long ago—

The Shakespeares and the Luthers and the Bonapartes, you know.

We are given a great mission, we are here today, on earth

To bring forth a race of giants, and to guard them from their birth.

To insist upon their freedom from the rocking that was bad

For our parents and their parents, scrambling all the brains they had.

Ah! If they'd been fed by schedule would they have been stunted so?

The Websters and the Lincolns and the Roosevelts, you know.

—Bishop Doane

EPIDEMICS OF CULTS

After the war there was a wave of popular interest in spiritualism. Since the stock market crash the public reaction has manifested itself in the sprouting of various new cults. A Variety dispatch reports that Chicago is finding them extremely popular, particularly with "performers."

When a speculator found that the bottom had dropped out of the market, and out of his own purse too, he turned away in despair from the material things of life. Hence the sudden epidemic of cults, some apparently quite sincere, others simply new rackets. But all "put on good shows," with mysterious rites and ceremonials.

The basis of nearly all of them is the power of mind over matter. They teach that happiness lies not in yachts and motor cars, country clubs and coupon-clipping, but within one's self. Failure, misery, poverty and presumably overdue bills are only manifestations of evil thoughts. They offer a comfortable "defense mechanism" to a man who might otherwise have been kicking himself for not having followed his own "hunch" and sold out sooner. But their stock may be expected to drop with the return of prosperity.—*New York Times*.

BYRON'S DRINKING CUP

Lord Byron's former home, Newstead Abbey, England, parts of which have just been purchased for the nation by Sir Julius Cahn, in the poet's time housed a number of curious relics which appealed to his somewhat morbid fancy. A visitor, soon after Lord Byron had sold the place, saw a stone coffin in the servants' hall, and in the study "a couple of the most perfect and finely polished skulls I ever saw." Probably they were found at the same time as the one which Byron had converted into his notorious skull drinking cup. It was said at the time by some ill-natured folk that the poet had exhumed the remains of one of his ancestors purposely to satisfy that gruesome whim, but Byron has left his own record that the skull was accidentally dug up by a gardener, who had no doubt encroached on an old burial-ground of the monks.

"Observing it to be of great size and in a perfect state of preservation," the account goes on, "the strange fancy seized me of having it set and mounted as a drinking cup. I accordingly sent it to town, and it returned to me with a very high polish and of a mottled colour like tortoiseshell." The skull was bound with silver and mounted on a stand.—*The Manchester Guardian*.

SCIENCE AND THE LAWYERS

It is fortunate for the cause of culture and of civilization generally that the search for truth has not been subjected to the restrictions put upon evidence in our modern courts. When science goes out after truth it scorns nothing, however remote, that may have some bearing.

Galileo accepted the testimony of a swinging lamp to get at a truth making possible the invention of clocks. Any lawyer would have told him the lamp is not a competent witness outside of matters of illumination. And Newton gets the truth about gravity from an apple—a common pie or cider apple not to be recognized in court apart from these humble limitations. And half or more of the ponderous evidence which Darwin collected to prove his elaborate theory of the Descent of Man was the merest hearsay about creatures that never messed in the affairs of man at all.

It is only when the investigation involves the lives of men and women and the safety of society that rules are made to ignore all but the primary and directly pertinent evidence.—*Detroit News*.

THE EDITOR'S EASY CHAIR

SIR CLIFFORD ALLBUTT*

"To you Sir Clifford, in fuller measure than any one in our generation, has been given a rare privilege: To you when young, the old listened as eagerly as do now, when old, the young. Like Hai ben Yagzan of Avicenna's allegory you have wrought deliverance to all with whom you have come in contact."—Osler.

Thomas Clifford Allbutt shared with Osler the honor of having been one of the leading physicians of the English speaking world during their generation. Osler's birth, education and career, includ-



SIR THOMAS CLIFFORD ALLBUTT

This picture is here printed through the courtesy of the Macmillan Company of New York.

ing his maturity, were largely spent in Canada and the United States, which fact has rendered him better known to the medical profession of these two countries than the subject of this charming biography by Sir Humphrey Davy Rolleston. The facts of Allbutt's career may be somewhat briefly stated. He was born at Dewsbury in Yorkshire, England, on July 20, 1836, the only son of the Rev. Thomas

*The Right Honourable Sir Thomas Clifford Allbutt, K.C.B., M.A., M.D., F.R.C.P., F.R.S., Hon.M.D., D.Sc. D.C.L., LL.D., Regius Professor of Physic in the University of Cambridge, Fellow and sometime classical scholar of Gonville and Caius College. A Memoir by Sir Humphrey Davy Rolleston, Bart., G.C.V.O., K.C.B., M.A., M.D., Hon.M.D., D.Sc., D.C.L., LL.D., Regius Professor of Physic in the University of Cambridge, sometime President of the Royal College of Physicians of London. Macmillan and Company, Ltd., St. Martin's St. London, and New York. Price \$6.00.

Allbutt, who was Vicar of the little town between 1835 and 1862. He is said to have been the first child to be born in the Dewsbury vicarage for over half a century. While himself a son of the vicarage, Allbutt had five medical uncles, including a great uncle. His academic training began in 1855 when he entered Gonville and Caius College, Cambridge, where he gained a scholarship in Classics in 1856. He was awarded the degree of M.B. at Cambridge in 1861 and the degree of M.D. in 1869. He was married during this latter year.

PRACTISING AT LEEDS

Following his graduation from Cambridge (M.B.) in 1861 he located at Leeds, where he practised for the next twenty-eight years. He was the same year elected Junior Physician to the Leeds House of Recovery (a peculiarly happy name for a hospital). Speaking of the nurses of the institution, "They were great powerful red faced women who all ate a great deal of beef and drank a great deal of beer, and lifted patients as you would lift puppy dogs." During this early period of his career Dr. Allbutt gained a great deal of experience in the diagnosis of acute fevers.

His biographer speaks of him as extremely well informed not only in all branches of his profession but in general and literary knowledge as well. Soon after settling in Leeds he became prominent in the Leeds Philosophical and Literary Society. The range of his interests extended from medicine to such subjects as "The Productive Careers of Great Men" and "The Travels of Early Peoples."

Allbutt experienced the lean years of medicine which have been and are still the lot of by far the majority of doctors, but to him these lean years were an opportunity. To quote from his biography, "Able to sympathize fully with young men in a similar position, he in later years often advised them to sow the seeds of success during these lean years by reading not only professional but good literature, and to hold on if necessary, as he expressed it, by 'eating their boots.' The habit of omnivorous reading and making critical notes on what he read, thus storing up material for future use, remained with him for life." Sir Clifford Allbutt was a student of medical history from a very early period in his career. As a result of reading during his period of waiting, was his first historical essay on The Medicine of the Greeks. It might be mentioned here that this is the first of a long series of papers on historical subjects which continued until the latter years of his life.

He had a rather striking characteristic of returning to and expanding a subject which at one time may have become the object of his study. This is seen not only in his historical essays but likewise in his writings on tuberculosis, cardio-vascular and nervous diseases.

DEvised THE CLINICAL THERMOMETER

One of the subjects which early engaged his attention was the history of the clinical thermometer. In 1866, the taking of patients' temperatures was not a routine practice. The clinical thermometer was employed, however, as early as the seventeenth century but did not come into general use until the second half of the nineteenth century. A rather crude instrument was constructed by Sanctorius in 1638, who advocated its use in the diagnosis of disease. A clinical thermometer three inches in length and three or four lines* in diameter, the central tube for the mercury being one-half line in diameter, was exhibited at Oxford in 1684. Van Swieten used Fahrenheit's thermometer, invented in 1720, for registering temperature in the mouth and axilla. A clinical thermometer described by John Spurgin, who lived in the first half of the nineteenth century,

was ten inches long and too cumbersome for general use. In 1865 Ringer published a book on The Temperature of the Body as a Means of Diagnosis of Phthisis, Measles and Tuberculosis. Wunderlich in 1868 wrote a work on Das Verhalten der Eigenwärme in Krankheiten which formed a stimulus to the study of clinical thermometry in England. Wunderlich's thermometer was nearly one foot long and was left in the axilla of the patient for from twenty to twenty-five minutes. This proved, however, a rather time-consuming process to the man with a large practice, so that until further improvements were made the thermometer was destined to be of limited practical use. In 1867 Allbutt had made a clinical thermometer six inches long which recorded the temperature when kept in the axilla for five minutes. He finally shortened it to three inches. It was marked in the Fahrenheit scale, which gave it immediate popularity in Great Britain. He in reality invented the form of clinical thermometer now in use.

THE HYPODERMIC OPERATION

While having no particular relation to the clinical thermometer, we might mention, parenthetically, that the hypodermic syringe was invented in 1844 by F. Rynd of Dublin. It did not attract attention, however, until in 1855, when Alexander Wood of Edinburgh wrote a valuable book on the subject of hypodermic injection for the relief of neuralgia, and described a syringe on the model of a bee's sting. Allbutt was the first to advocate the use of morphine by hypodermic injection in the distress and dyspnea of cardiac disease. An amusing incident of these early times was a solemn consultation in the Leeds Infirmary as to whether the physician should give the hypodermic injection with his own hands or whether the surgeon should be called in to perform this operation.

An account of the life of Sir Clifford Allbutt would not be complete if the matter of recreation were omitted. Since his days as an under-graduate at Cambridge he had been an Alpine climber and took the keenest interest in this out-of-doors pastime to the end of his long life. As he himself says, "When I felt it was possible to slip I felt it was time to give up." Dr. Allbutt was accustomed to spending six weeks of each year away from his professional duties. These vacations were spent for the most part in Switzerland or in the English Lake country or in Scotland. He maintained that the custom was a good prophylaxis against high arterial tension. He wrote rather extensively of his experiences and was for years a more or less regular contributor to the Alpine Journal.

PHYSICIAN PROTOTYPE

It is almost needless to say that a person with such a long and prominent career had met during his life-time many important personages. Allbutt was a friend of George Eliot, and it has been conjectured that he was the prototype of Tertius Lydgate of Middlemarch, which novel was published in 1872. She visited Leeds in 1868 and was entertained by Allbutt, whom she spoke of as "a good, clever and graceful man, enough to enable one to be cheerful under the horrible smoke of ugly Leeds." Those who have read George Eliot's Middlemarch will note certain differences between the character in Middlemarch and the subject of this biography. There will be found, however, enough resemblances to indicate that George Eliot was influenced by Allbutt's personality in the creation of the character of her novel.

Allbutt was favored as consultant by his peculiarly happy mental equipment. He is described as possessing not only a fine intellect and kind heart but a presence and style which marked him as a great man. The following description by Chadwick, a

*A line is one-twelfth of an inch.

former associate, describes an ideal to which every consultant might well aim. "His 'bedside manner' could never have been surpassed; in consultation he always gave the very greatest satisfaction to everyone concerned; he was always hopeful, even in the most hopeless cases, and always left the patient with the feeling that not only was there considerable cause for hopefulness, but that the patient was the one person in whom Dr. Allbutt was specially interested." F. H. Garrison, the American medical historian, in comparing Allbutt with Osler wrote, "Allbutt was, in fact, the spiritual aristocrat, just as Osler was an essential democrat in professional relations, gregarious and fond enough of people to be sometimes victimized by them." These estimates of the man are by no means incongruous.

Allbutt was much concerned over medical men appearing in courts as expert witnesses, contradicting one another about facts. In Leeds he effected a reform by getting the profession together at a meeting at which it was agreed to combine in refusing to give evidence in legal cases unless a consultation were arranged between medical witnesses on both sides before the case came to trial. From pronounced opposition at first on the part of the legal profession, it was eventually accepted as a forward movement in the furthering of justice. Any of us who has been called as medical witness appreciates what it would mean not only in assisting in a just verdict but to one's equanimity as well, were the medical witness on each side given the opportunity of consultation at so far as defining the facts of a case. Such matters as concern the study of personal injury cases cannot be elucidated by argument.

RETIREES FROM GENERAL PRACTICE

In 1889, a turning point in his professional career, Allbutt accepted a Commissionship in Lunacy and moved from Leeds to London. This meant sacrificing a much larger income for a salary of \$4,000 a year. It meant also freedom from the demands of what had come to be a very strenuous consultation practice. His interests, besides cardio-vascular diseases, included also psychiatry and neurology. He wrote extensively on the subject of essential hypertension which he called *hyperpiesia*. He was the first to describe the condition which we understand as essential hypertension and to differentiate it from the hypertension associated with kidney disease. In connection with his studies on arterial tension, he at one time advocated periodic blood pressure examinations, and afterwards recanted saying that "This rule would indeed set up an epidemic of fidgets." He even advocated the treatment of high blood pressure even though it was a symptom. "Until we find the key to the metabolic lock," said he, "why not treat a symptom, if the symptom itself be a nuisance?"

Here might be mentioned his reaction to psycho-analysis. "I have had intimation again of the terrible mischief these men [psycho-analysts] do; even those supposed to be 'trained': young women with minds poisoned, family secrets dragged into the light, bitter discussions, and so on. Calamitous! It is a fashion like 'christian science,' etc. We do not realize the harm that is done by talking about things. Evil things become familiar and tolerated."

REGIUS PROFESSOR, CAMBRIDGE

Three years later Allbutt was appointed Regius Professor of Physic of Cambridge, a position he held with distinction until his death. Sir William Osler held a similar position at Oxford from 1905 until his death in 1919. The academic atmosphere of these institutions was, to say the least, very congenial to two men of such intellectual background; while advancing in years neither ever grew old in spirit or mental outlook. The position at Cambridge

gave opportunity for the writing and editorship of Allbutt's System of Medicine, which was his magnum opus. This work is almost as well known on this side of the Atlantic as Osler's system. Both writers were masters of unexampled diction. Allbutt was an artist in the employment of words. The materials in writing are words which the writer selects with as much skill as the artist his colors, if his language is to be in reality the flesh garment of thought. Sir Clifford Allbutt deplored the poorly written English of the Cambridge medical student of his day. "It is sad to hear it commonly said that the day of learned physicians is past, that they are gone with periwigs and bric-a-brac. And I have had already to observe to my pain that the Cambridge medical student of today is by no means 'learned'; that too often he thinks loosely, and that he does not always write even the English of gentlemen who do the fires and the murders for country journals. On his Latinity I will discreetly keep silence."

He strongly advocated the writing of essays or theses, particularly for the M.B. and M.D. degrees. As a means of promoting greater clearness of thought and expression and to aid in a substantial way, he wrote a splendid handbook of notes on the composition of scientific papers. In this handbook, along with much sound advice, is a chapter containing gems culled from theses and examination answers, regarding which the author said that "quotations are given for the most part without acknowledgment, for obvious reasons." He disparaged the pedantic use of Latin and Greek plurals of words that had come into common use, as "asyla" for "asylums." In regard to studying models of English prose we have this: "Imitate no one but read to strengthen and enlarge your ideas, your understanding and your language." I would like to quote page 162, in which his biographer has described Allbutt's method of composition, but space will not permit. The biographer concludes, "His literary style thus had an easy grace and was attractive for its refreshing difference from the ordinary run of medical writing and on account of the occasional use of good old words. Just as he was always well groomed in person, so was he equally careful in literary expression, and with a fastidious feeling for words and phrases, chose them like an epicure."

WHO ARE FITTEST TO SURVIVE?

On the live subject of eugenics and the survival of the fittest, which of recent years has taken concrete form as birth control, Allbutt said: "We cannot tell which shall be the *fittest* till the form of the coming time is revealed. A society at one time may need bone and muscle, at another time may dispense with some of its prizefighters and need the qualities of the inner life. . . . Tenderness, gratitude, love are more to us than two legs, two arms, or two lungs; moreover, the higher gifts of the imagination may be found in the frailest or the humblest vessels. What would have been our loss had the parents of Keats or the Lambs been forbidden to marry by the common order of medical men to forbid the unions which may produce such children?"

In an address entitled "On Professional Education with Special Reference to Medicine," he concludes: "That no teacher reaches his best till middle life. Not till then does he gather the fruits of experience, or attain to a rich and vital sense of our ignorance; not till then does he wholly escape from formulæ and routine; not till then does he learn what to leave unsaid; then it is that erudition and experience mellow into wisdom." The address was partly a reply to Osler's valedictory address entitled the "Fixed Period," in which he referred to the "comparative uselessness of men above the age of forty."

VISITS THE UNITED STATES AND CANADA

Allbutt made several visits to the United States and Canada—the first in 1898, when he crossed the continent to San Francisco where he delivered a series of lectures. He was particularly impressed with the eagerness of the American mind for education for he says, "I have just returned from the United States, and I am sure we have lost three good generations in England. I found those people so quick that the moment they see there is new knowledge to be made they realize the importance of making it quickly, and they are ready to endow it. A professor said: 'We have only to go up and down in the street to get any money we want and if we are able to show them we are going to make new knowledge.' That is the spirit we want in this country."

REACTIONS

Allbutt's attitude towards certain habits is of interest. He claimed that smoking cigarettes added ten years more to the record of age upon a woman's face. He exhibited an idiosyncrasy to tobacco and was therefore a non-smoker all his life. So offensive was it to him that he was obliged often to avoid public dinners. Port wine always gave him a cramp and bouillon taken in the evening meant a sleepless night. If he drank tea during the day, he was wont to wake at 4 A. M. with a pulse rate of 160, which would after a few minutes return to normal. Salicylates had a powerful effect on him and had to be taken in small doses only. He was a moderate eater, partaking sparingly of meat. His health history was, as the case history taker would say, "uneventful" though characterized at times by symptoms that are experienced by the neurotic. He reports that one night, about fourteen years before his death, he woke suddenly and found that his breathing had stopped though he could continue to breathe by voluntary effort. This condition, which did not last long, recurred about once a year.

In conclusion, in the language of his biographer, "In early life an original investigator both in the laboratory and the wards, then a busy consulting physician, and after that for thirty-two years a Regius Professor with a world-wide reputation, he was throughout an independent thinker, a cultured man of letters, and a philosopher; but greater even than these were the character and personal influence of the man who became the undisputed doyen of his profession in this country."

On February 21, 1925, he died.

"A scholar-physician, an inspiring leader, and a beloved humanist."

J. H. Dempster

THE DOCTOR'S LIBRARY

RADIUM IN GENERAL PRACTICE—By A. James Lar-kin, B.Sc., M.D., D.N.B., Radium Consultant on Staffs of Wesley Memorial, German Evangelical Deaconess, John B. Murphy, Washington Park Community Hospitals, Chicago, and St. Francis Hospital, Evanston; Instructor in Dermatology (Radium), Northwestern University Medical College. With twenty-eight illustrations. Paul B. Hoeber, Inc., New York.

From the title of the book one would conclude that it was written for the general practitioner, and that was one purpose the author had in mind when preparing the treatise. Recent investigations in radioactivity have caused such radical changes in the field of physics that he believes similar changes may occur in the field of medicine and unless the medical profession in general becomes familiar with the principles of radioactive therapy, it may find itself

unprepared if such changes come about. Therefore this book deals with the elements of radium therapy in order that the general practitioner may obtain a true evaluation of its possibilities and thereby more intelligently select the cases suitable for this type of treatment. It should also aid him in selecting a competent radium therapist, which is an important factor in obtaining the best results from radium therapy. The first chapter deals with the mechanics of radium, general technic, biological reactions, contraindications to treatment and the dangers of application. The remaining chapters deal with radium therapy in the various diseases under four different headings, namely, general diseases, gynecological diseases, miscellaneous tumors, carcinomata, miscellaneous skin lesions. Diagnosis is not discussed but considerable space is given to pathology in each case. The application of radium and its reaction in each disease are described in detail and there are twenty-eight illustrations. Theoretical considerations are not discussed, but a supplementary bibliography of twenty-four pages makes such knowledge available.

CLINICAL ATLAS OF BLOOD DISEASES—By A. Piney, M.D., M.R.C.P., Research Pathologist, Cancer Hospital, London, Consulting Pathologist, Chelmsford Hospital, and Stanley Wynd, M.D., M.R.C.P., Physician, Bolingbroke Hospital, and Assistant Physician, Cancer Hospital, London. With 36 illustrations, 32 in color; P. Blackiston's Son & Co., Inc., 1012 Walnut St., Philadelphia, Pa. Price \$4.00.

This small atlas of slightly over one hundred pages contains thirty-two colored plates which were made from actual blood smears of the various blood diseases. The first seven plates illustrate the development of the different types of blood cells. The atlas was published particularly for the benefit of students and the general practitioner and therefore it contains in addition brief but complete accounts explanatory of the various plates. There are seven pages devoted to definitions of terms used in connection with blood diseases. The book is essentially a brief text of hematology which should be very suitable for the general practitioner, especially one who does his own laboratory work.

THE CREED OF A BIOLOGIST, A BIOLOGIC PHILOSOPHY OF LIFE—By Aldred Scott Warthin, Ph.D., M.D., LL.D., Professor of Pathology and Director of the Pathological Laboratories in the University of Michigan, Ann Arbor. Published by Paul B. Hoeber, New York, 60 pages, 1930.

Professor Warthin believes that knowledge of modern scientific investigation, rather than superstition, faith, or fear, should form a rational basis for living. With this in mind, he has formulated a credo or philosophy of life which will prove interesting to anyone without mental bias. The viewpoint is individualistic; the argument is well presented and rational. His credo in abstract form is worth quoting. "I believe in the law, in the immortality of the germ plasma and in the creative, progressive evolution of life, in the variability of value of the germ plasma through heredity and environment, in the transmission of acquired characters, and in the conscious improvement of the race through the laws of volitive eugenics. I believe that the aim of the individual life is the protection, improvement and continuation of the immortal germ plasma, and that this is best secured by self-development in the highest possible degree, through a permanent monogamic sex-partnership, with limitation of offspring towards the securing of the best possible results in the progeny, and their best preparation for the continuation of the process in the next generation. In this belief, the universe is rationalized for my intelligence and reason, I accept it with optimism, relinquishing all desire for a personal immortality, and, unafraid, believing that whatever Gods may be, the game of life will have been played squarely and according to the law."—W. T. D.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

The American Medical Association Annual Meeting, Detroit, June 23-27th.

Dr. H. N. Torrey, Detroit, will return May 1 from a winter spent in the south.

Dr. Richard R. Smith, Grand Rapids, has returned from a three months European trip.

Dr. H. S. Collisi of Grand Rapids devoted two weeks in March to visiting Philadelphia and Baltimore clinics.

Dr. William Hackett and Dr. R. J. Scott have returned and resumed practice after a few weeks spent in Florida.

Dr. G. L. LeFevre of Muskegon is the chairman of the Board of the recently amalgamated Union and Hackley National Bank.

Organized Medical Activities was the subject of the State Secretary's address before the Highland Park Physicians Society on April 3.

The April issue of the American Journal of Surgery contains an article, biographical, on Oliver Wendell Holmes compiled by Dr. F. C. Warnshuis.

Dr. and Mrs. William Appelbe have returned to Detroit after approximately two months spent at Pasadena, California.

Members are urged to engage their hotel reservations for the Detroit A. M. A. meeting. Write at once in order to secure satisfactory accommodations.

Dr. Louis Klein of Detroit has been appointed Consulting Endocrinologist of the Wayne County Clinic for Child Study in connection with the juvenile court.

The Michigan State Board of Registration in Medicine will conduct its June examinations in Ann Arbor on the 11th, 12th and 13th and in Detroit on the 16th, 17th and 18th.

Dr. Frank P. Mabey of Detroit and Dr. F. W. Hartman, Pathologist Henry Ford Hospital, Detroit, are around again each after several weeks in bed from fractured vertebrae.

The March meeting of the Jackson County Medical Society was held at the Hayes Hotel, Jackson, on March 18th, when Dr. Leo Bartinmeier of Detroit spoke on the subject Potential Pre-Psychotic Personalities.

Dr. Lawrence Reynolds of Detroit and Dr. P. M. Hickey, Professor of Roentgenology in the University of Michigan Medical School, have returned from a sojourn in Florida where they have been enjoying the sunshine.

Dr. O. L. Ricker of Cadillac, Michigan, was confined to bed. The cause of the illness was gastric hemorrhage from peptic ulcer. Dr. Ricker is Councilor of the Michigan State Medical Society representing the 9th District.

Wayne County Medical Society is sponsoring a course on Medical Economics. The lectures are given by well known attorneys, bankers and business men of Detroit. Dentists, nurses, office attendants and private secretaries were invited to attend the course.

The Fifty-Seventh Annual Meeting of the Northern Tri-State Medical Association met at Fort Wayne, Indiana, on April 8th. Michigan was represented on the program by Dr. Carl D. Camp of Ann Arbor. His subject was The Effect of Emotions on Secretions.

Is horseback riding attracting our golfing medicos? You will think so if you converse with J. Stuart Pritchard, M.D., of Battle Creek. Dr. Pritchard has enrolled 36 riders in the recently formed Battle Creek Riding Club. And "Pritch" used to be some golfer.

Dr. B. H. Larsson of Detroit has been promoted from Major to the rank of Lieutenant-Colonel of the Reserve Medical Corps. This appointment has been made upon the satisfactory completion of a course in study in discipline and the passing of an examination. The Journal extends its congratulations to our fellow member.

According to the Bulletin of the Genesee County Medical Society the report of the Health Department of the city of Flint from March 8 to March 22, 1930, shows the following: Chickenpox 46; Diphtheria 7; Erysipelas 1; Measles 16; Meningitis 2; Mumps 13; Pneumonia 11; Scarlet Fever 37; Smallpox 4; Tuberculosis 13; Whooping Cough 28.

Dr. L. D. McMillan, recently of Onaway, on January 1st joined the Marine Hospital at Buffalo. The staff has a rotating service, the doctor being at present mostly on the G. U. Onaway's population we understand has dwindled since the burning of the wheel works a year ago. Dr. Carpenter still holds the fort there.—*Northern Michigan Medical Bulletin*.

A sad calamity overtook certain members of the "younger" sex at Gaylord last October, when a previously eligible young bachelor ceased to exist as such. Dr. Gordon McKillop, the man behind the Gaylord Hospital at that time, took unto himself a wife and nurse, one Mychalyn Ambroski, R.N.

Some name, isn't it? But wait till you see the girl herself. Congratulations are a feeble word for it."
—*Northern Michigan Medical Bulletin*.

The regular meeting of the Washtenaw County Medical Society was held Thursday evening, March 20th, at the Allenel Hotel, Ann Arbor. The meeting was addressed by Dr. Max Ballin of Detroit on the subject Progress in Surgery of the Endocrine System. Among other things discussed at the meeting were the requirements for Fellowship in the American Medical Association.

The Genesee County Medical Society at Flint was addressed by Dr. Robert Noby of Detroit at its regular meeting on March 19th. The Genesee County Medical Society is active in securing subscriptions for the new History of Michigan Medicine which is edited by Flint's honored townsman Dr. C. B. Burr. A committee was appointed consisting of Dr. H. Randall, Dr. J. G. R. Manwaring and Dr. F. Miner.

During the month of April the physicians of the State of Michigan have been furnished ballots by the *Literary Digest* for the vote on prohibition. Each physician should take this opportunity to mark his ballot for strict enforcement, modification or repeal, as the case may be. It will be interesting to know how the medical profession of the State stands in regard to this important subject.

Clinical conferences are being held at the Herman Kiefer Hospital, Detroit, under the auspices of the Wayne County Medical Society; that on Infectious Diseases is given by Dr. Gordon, Physician-in-Chief of the Hospital, every Wednesday morning at ten o'clock. The clinical conference on Psychiatry is given each Saturday morning at ten o'clock at the Receiving Hospital and is in charge of Dr. David Clark. These clinics are open to the medical profession of the State as well as the County of Wayne.

Dr. B. H. Nichols of Cleveland, Ohio, addressed a joint meeting of the Detroit Roentgen Ray and Radium Society and the Detroit Urological Society on the evening of March 13th. His subject was The Use of Uroselectan in Pyelography. This is a method of making pyelograms by injecting the drug intravenously. The radiographic examination made at different intervals following the injection shows the kidney pelvis, ureter and bladder. This is a new method of pyelography which may supplant the method of injecting the ureters with solutions of opaque salts such as sodium bromide.

A large crowd attended the lecture by Dr. Winnett Orr of Lincoln, Nebraska, it being the second lecture given by the Detroit Orthopaedic Foundation in the Auditorium of the Wayne County Medical Society on the evening of March 25th. This lecture Foundation is under the management of the Beaumont Foundation Committee. Both Dr. Orr's lecture and those given a few weeks ago by Dr. T. Wingate Todd will be published in a few months and thereby be available to the medical profession of the State.

Beginning this year the American Association for the Study of Goiter will award a cash prize of \$300 annually for the best original thesis dealing with some phase of the goiter problem. Theses should be submitted by June 1, to Dr. Walter M. Simpson,

Chairman of the Essay Committee, Miami Valley Hospital, Dayton, Ohio. The award will be given immediately following the coming meeting of the Association which is to be held in Seattle, Washington, July 10-12, 1930.

The Detroit Medical Club was addressed at its regular meeting on March 20 by Professor Hussey of the Department of Geology of the University of Michigan. The subject of Dr. Hussey's address was Pre-Historic Remains as Found in America. The Club was out in full force and manifested great interest in a non-medical subject. On March 29 they held a dinner at the Detroit Club which was addressed by Dr. Hugh Cumming, Surgeon-General of the United States Health Service.

Dr. S. W. Donaldson, Roentgenologist of St. Joseph's Mercy Hospital, Ann Arbor, Michigan, has kindly consented to prepare a paper on the subject of "X-Ray in Court" which will appear in a future number of the Journal of the Michigan State Medical Society. Considering the large number of cases involving personal injury either industrial or accident outside of factories, the X-ray looms large as a factor in court testimony. Dr. Donaldson's article will be prepared with the utmost care. It should be read by all members of the medical profession and legal profession as well.

The Scientific Award Committee of the Phi Lambda Kappa National Fraternity has recently awarded a gold medal and cash prize to Maurice M. Silverman of the Senior Class of the Detroit College of Medicine and Surgery for the best undergraduate thesis offered in this year's annual contest. The subject of the thesis was "Malformations" and was the same thesis written for graduation credit in the course of pathology. The prize is open to students of all Class A colleges in the United States. This is the second time in three years that the medals and prizes have been won by students of the Detroit College of Medicine and Surgery.

"The March issue of The Journal of the Michigan State Medical Society was one of the most interesting editions of this valuable periodical. The Journal fairly oozes with information and camaraderie. It reflects a sincere effort to organize medical men into an educative and friendly unit, all working together for better public health. Michigan can well be proud of its medical journal. It is instructive and has in addition that intangible quality of warmth. Read it and find how true is this statement."—*Bulletin of the Wayne County Medical Society*.

Thank you. We are just human enough to appreciate such a sentiment as expressed by our Wayne County contemporary.

The United States Marine Hospital, which has been completed, was dedicated on the 29th of March on the reservation of the Old Windmill Pointe light house at the junction of Fox Creek with the Detroit River. The new structure, made possible by an appropriation by congress, cost approximately \$600,000. It is of one-hundred and thirty-five bed capacity. It supersedes the old building which was erected in 1855 on Jefferson Avenue. The following officials took part in the dedicatory program: Ferry K. Heath, assistant secretary of the treasury; Dr. Hugh Cumming, surgeon-general of the United States health service; Dr. Fred M. Meader, of the Detroit department of health; Norman B. Conger, president of the Federal Business association;

George A. Marr, vice-president of the Lake Carriers' association; Luther Ellis, regional manager of the Veterans' Bureau; Charles A. Park, superintendent of lighthouses, and Representatives Robert H. Clancy and Clarence J. McLeod.

Dr. Francis R. Packard, a prominent otolaryngologist of Philadelphia, better known to the profession as medical historian and editor of the *Annals of Medical History*, addressed the Detroit Academy of Medicine on March 27 at a dinner held at the Detroit Club. About twenty-five guests were present, chiefly from Ann Arbor and Detroit. The subject of his address was "The Hunters, John and William, a Study in Contrasts." Dr. Packard, who is one of the two leading medical historians in America, the other being Fielding H. Garrison of Washington, presented one of the most interesting addresses ever delivered in Detroit. Afterwards he showed a number of lantern slide illustrations dealing with his subject. The Detroit Academy of Medicine is to be congratulated on this feature of its program.

The newest publication in Michigan, so far as we know, is the *Bulletin of the Northern Michigan Medical Society* issued from Central Lake. It is, "Published occasionally by the society of that name by ourselves, for ourselves, with profound gravity and decorum. This Bulletin will either be sustained by members bringing in ads, patronizing our advertisers (and telling 'em why), or it will be put out of its misery by those who don't. Just as you like." We leave our readers to guess who the editor is. We wish to register our commendation and congratulations for this newsy little brochure giving the happenings of the counties of Antrim, Charlevoix, Emmet and Cheboygan. Page 14 contains a roster of physicians, who are enjoined by the editor to give their specialty. "All members retaining 'physician and surgeon' in the next issue will be fined three large potatoes or one squash."

The Medical Library once owned by the Wayne County Medical Society is now under the control of the Detroit Library Commission as the Medical Science Department. We have procured the following statistics which will be of interest to the members of the Michigan State Medical Society living in Wayne County. The library was used the year July 1, 1928, to July 1, 1929, by 2,717 doctors. The total attendance for the same year, which included of course students and laity as well, amounted to 20,536. The total number of books circulated for the same period was 7,314; the number of physicians who used the library January and February of this present year was 487. It is estimated that approximately 500, or one-third the number of physicians, members of the Wayne County Medical Society, used the library sometime during the past five years. The number of volumes in the library on January 1, 1929, was 30,426; there are 299 current periodicals on file; 19 periodicals in French, 41 in German and 3 in Scandinavian.

The annual meeting of the Michigan Association of Industrial Physicians and Surgeons was held in Flint in the Hurley Hospital, Friday, April 25. The day's program comprised industrial clinics conducted by Dr. D. L. Treat, chief surgeon for the Buick Motor Company and Dr. L. H. Childs, chief surgeon for the Chevrolet Motor Company. At the luncheon hour there were short talks on "Health Education in Industry," by Dr. Guy L. Kiefer, State Health Commissioner, and on "Rehabilitation," by Mr. John J. Lee, Supervisor of Vocational Rehabilitation.

Subjects presented for discussion in the afternoon were "Fractures from the Standpoint of the Industrial Physician," by Dr. C. E. Selby of Toledo; "The Relation of the Physician to Industry," by Dr. C. H. Collisi, Grand Rapids; and "Lame Backs," by Dr. F. C. Kidner, of Detroit. Following the Banquet at the Durant Hotel, Mr. L. J. Corey of Detroit spoke on "The Workmen's Compensation Law from the Standpoint of the Lawyer and Physician." Dr. C. S. Gorsline, Battle Creek, president of the association, presided at the meeting, which was well attended and marked a new era in the organization's progress. Items from the meeting will appear in early issues of the *Journal*.

Dr. L. A. Farnham was chosen mayor of the City of Pontiac at the organization meeting of the City Commission held Monday evening at the City Hall. Charles L. Rockwell, mayor for the past five years, was named mayor pro tem.

City Clerk Harry A. Maurer called the meeting to order, after which the commissioners proceeded to select the mayor and mayor pro tem by ballot. When the result was announced, Dr. Farnham took the mayor's chair and thanked the commissioners for the honor. In speaking of the long period of service of Commissioner Rockwell he said:

"It is too much of a burden for one man to bear indefinitely, especially when the burden is as heavy as it has been in the past few months. There are six other members of this body who could fill this place better than I can but if it is your wish that I undertake it I shall be glad to do so. I want to serve notice on you, however, that on account of my profession it will sometimes be impossible for me to attend every gathering the mayor is expected to attend and that I shall call on each one of you to help me out. Each member of this body is as fully competent to represent the city as I am."

Mayor Farnham presided during the remainder of the meeting. The new mayor has been a commissioner since April, 1924. His recent election was the third one. He and Charles L. Rockwell and Charles Gibford were returned to office by substantial majorities at the recent spring election.

A clinical meeting of the Detroit Academy of Surgery was held on Thursday, April 10, at 4:30 P. M. at the Receiving Hospital. The program was as follows: Dr. H. K. Shawan, Embolectomy; Dr. H. Wellington Yates, Malformations; Dr. William E. Keane, Bladder Injuries; Dr. A. D. LaFerte, Fractures; Dr. J. C. Kenning, X-ray Diagnosis of Welch Bacillus Infection; Drs. Leo Dretzka and E. S. Gurdjian, Peripheral Nerve Injuries. The evening session of the Academy was held at the Detroit Athletic Club when papers were presented by Dr. Walter Hackett, Report on Spinal Anesthesia, and Dr. Nathaniel Gates, Duodenal Stasis. A very interesting feature of the evening program was an illustrated address, by the President of the Academy, Dr. Roy D. McClure, entitled "Kettering in the Galapagos Islands," which was a moving picture show lasting about two hours, illustrating the experiences of Mr. Kettering and Dr. McClure and company on Mr. Kettering's yacht. The Galapagos Islands were made famous first through Darwin's visit on the voyage of the *Beagle* in 1831 and more recently by Dr. William Beebe, who has written a very interesting book on his experiences in the Galapagos. To one who has read Darwin's voyage of the *Beagle* and Beebe's work on the Galapagos the illustrated lecture which was participated in both by Dr. McClure and Mr. Kettering was a most interesting experience.

DEATHS

Dr. William J. Kay

As this Journal goes to press word has been received of the death of Dr. William J. Kay of Lapeer, Michigan, Superintendent of the Michigan Home and Training School of Lapeer. His death occurred at 12:30 A. M., April 16th. Dr. Kay was 63 years of age. He is survived by his wife and one daughter, Elaine, and two grandchildren, as well as two brothers, Frederick B. Kay, Postmaster of Lapeer, and George Kay of Baltimore, Maryland, and one sister, Mrs. Louis C. Crampton, of Washington, D. C. An appreciation of Dr. Kay's life and career will appear in the June number of the Michigan State Medical Society Journal.

OUR DAILY BREAD

During the last two decades there has been a running debate in this country and abroad with respect to the nutritive merits of bread made from so-called whole-wheat flour and of bread prepared from milled wheat in the form commonly known as white flour. Certain significant features of the controversy deserve emphasis at the outset. "White bread" has established itself as a staple constituent of the American dietary. Despite persistent propaganda against the familiar daily loaf, its popularity cannot truthfully be said to have waned except so far as there has been a general decrease in the consumption of all cereal breads as a characteristic incident of our growing national prosperity. Cereals represent the cheapest sources of energy for man. In times of stress they are depended on to furnish most of his calories. But when great economies are no longer necessary there is a universal tendency to include more foods from other and more expensive sources—meats, poultry, fish, milk, vegetables and fruits—in the human dietary. Furthermore, the nutritive quality of much of the white bread has gradually undergone improvement through the incorporation of larger quantities of milk in the loaf. "Milk bread" seems to be gaining in popularity; its comparative superiority over the older type has been demonstrated by actual experiment. Milling processes have been adapted to the production of the "refined" flours which have superior keeping properties, so that the welfare of a large industry is involved in proposed innovations.

The advocates of the use of "whole wheat" correctly refer to the chemical advantages of this food product. It contains more of the bran with its constituent proteins and salts, together with a slight increment of vitamins B and G. Cereals are not to be looked on as the dominant source of vitamins in any event, so that the comparison of wheat in different degrees of milling extraction seems somewhat gratuitous. The branny coats are admittedly resistant to digestion; witness the use of bran as a laxative. One may well argue, therefore, that any inherent chemical advantages in the richer content of protein in whole wheat are offset in some degree

at least by its poorer utilization. The choice may therefore well be left to individual preferences and tastes.

These arguments are familiar to every student of nutrition and to most physicians. They would scarcely deserve reiteration here except for the insidiousness of some of the propaganda on the subject. White bread is sometimes referred to by the protagonists of whole wheat products as a deadly menace to mankind—as though men were accustomed to "live by bread alone." It has been linked with cancer by the most unscrupulous of the promoters. What food has not been charged with complicity in the genesis of this dreaded malady? White bread has been charged with responsibility for other ills to which flesh is heir. The opponents are sometimes swayed by a frenzy of belief; often they are merely profiteers in a cult; sometimes they are well reasoning advocates of whole cereal. Yet even during the stress of war-time needs the U. S. Food Administration, under unselfish guidance, declined to foist the use of whole wheat on a patriotic American public.

It is interesting at this juncture to record the same conclusions of recent independent investigators of the problem in Great Britain:

In advocating whole-meal bread for general use, whether in times of need or in times of plenty, it should be remembered that not only men but also women and children are concerned, and that all the experiments on which the arguments are based have been carried out on animals or adult males. Children are very intolerant of high cellulose diets, and, for some, brown bread is far too irritating, even if given with the idea of relieving constipation. Appetite is such an important factor in all digestive considerations that no one who dislikes a food of unproved value should be forced to eat it if it can be avoided. In time of peace, of course, the grown-up population, if they have the choice, will never eat whole-meal bread unless they like it, no matter how specious the advertisement, but they may force their children to eat it in the belief that they are doing them good. One should, therefore, be cautious in advising whole-meal bread generally, and wait until careful unbiased experiments have been done on a sufficient number of men, women and children. Thus only can accurate conclusions be drawn.

The subject has been approached from a somewhat different angle by Abelin of Bern, who points out that, paradoxical as it may sound, the bread problem really is apart from bread and cannot be solved by means of bread. If we wished to avert all the dietary shortcomings of bread and produce an ideal loaf—one in which the proteins are nutritively ideal, the mineral ingredients are adequate and the vitamin content is satisfactory—the product would no longer be recognized as bread. It would probably be a dietary innovation that few persons would be willing to accept in their daily food. There are no perfect single foods. One food product makes up for the deficiencies of another. The secret of perfect nutrition and the lessons of the science of physiology are expressed in the dictum of a proper choice of more than one food. Bread of any sort needs to be supplemented suitably in the modern diet.—Journal A. M. A.

SOCIETY ACTIVITY

Revealing Achievements and Recording Service

Frederick C. Warnshuis, M. D.
Secretary Michigan State Medical Society

PROGRAM IN POST-GRADUATE MEDICINE

June 2nd to June 21st, Detroit, Michigan

The Department of Post-Graduate Medicine of the University Medical School and The Michigan State Medical Society offer the following program in Medicine and Surgery for graduates.

MEDICINE AND SURGERY

Case History	1 hour
Constitution	1 hour
Clinical Pathology.....	1 hour
Physical Diagnosis.....	3 hours
Preventive Medicine.....	2 hours
Otolaryngology	2 hours
Clinical Pathological Conferences.....	3 hours

MEDICINE

Diseases of the Circulation.....	14 hours
Diseases of Metabolism.....	10 hours
Tuberculosis and other Diseases of the Lungs.....	7 hours
Syphilis	3 hours
Pediatrics	6 hours
Endocrinology	3 hours
Dermatology	3 hours
Infectious and Communicable Diseases	6 hours
Diseases of the Digestive Tract.....	8 hours
Neurology and Psychiatry.....	7 hours
Unclassified	4 hours

SURGERY

General Surgery	27 hours
Gynecology	10 hours
Obstetrics	4 hours
Proctology	6 hours
Surgery of Childhood.....	5 hours
Orthopedic Surgery, including Fractures	10 hours
Urology	6 hours
Thoracic Surgery	3 hours

The above teaching program consists of lectures and discussions in the mornings, while the afternoon hours will be devoted to Surgical and Medical Clinics in Harper, St. Mary's, Receiving, Herman Kiefer and Grace Hospitals.

For further information address the Department of Post-Graduate Medicine, University Hospital, Ann Arbor, Michigan.

WHY EVERY MEDICAL MAN IN MICHIGAN SHOULD ATTEND THE AMERICAN MEDICAL ASSOCIATION MEETING IN DETROIT

The reasons why every medical man in Michigan should attend the A. M. A. meeting are many, and should be convincing. In the first place no medical man can attend these meetings without learning something. He will learn something which will be of value to him in his practice. He will go back to his constituency better prepared to practice his profession. The section meetings of the American Medical Association are thoroughly scientific and up-to-date and instructive. It has been my good fortune to attend medical meetings in nearly every part of the civilized world. I know of no more progressive, scientific and valuable meetings than those of the different sections of the A. M. A. In each section one will hear the latest phases of the special subject discussed by men eminently qualified to do so. The only trouble is that there is an embarrassment of riches. There are so many good things going on at the same time that one is at a loss to know which way to turn. He sometimes finds himself much in the situation of the fabled ass who, finding that he was equidistant from abundant food on each side, starved to death before he could decide upon which way to go. The papers and the discussions in the different sections are certainly worth hearing, and possibly worth participating in. One may get valuable material himself and at the same time carry information to others.

Next in importance to the meetings of the sections, I would place the scientific exhibit. Here one finds the latest devices, the most important instruments of precision, every mechanical help in diagnosis, the latest chemical studies, all so arranged that he who runs may read. If the meetings of the A. M. A. did nothing else than bring together the wonderful and valuable scientific exhibits which have marked these meetings for the past few years, it would fill an important function and would justify every medical man in attending. There you will find the latest microscopes, microtomes, optical instruments, blood testing apparatus, in short everything which the doctor uses. One cannot afford to miss these demonstrations. Even when the exhibit does not directly concern one's special line of prac-

tice, he learns much which increases his value as a physician; he becomes a better man and a better practitioner.

Closely connected with the scientific exhibit one will find the display of new books, new journals, new monographs, everything new from the press which may be of benefit to the medical man. In this way one is able to keep himself in touch with the times, and the doctor who falls behind the times is soon irretrievably lost. No one finds this out quicker than his intelligent patients. The intelligent people of a community will appreciate the doctor's going to the meeting of the A. M. A. They will think he is likely to learn something there which will make him a more capable and efficient practitioner of medicine. The commercial exhibits are also of great interest. The medical man is never able to get entirely away from the manufacturers. He will see what the manufacturers of instruments and the manufacturers of medicines are doing. Besides these, there are displays of charts illustrating the work of preventive medicine, showing how this disease and that has been reduced, what measures have been taken, how to secure better water and better air. School hygiene is usually well illustrated and from these exhibits the doctor returns to his home with much which he may utilize in the prevention of disease. While credit for this comes slowly from the public, it is coming surely. No physician in Michigan can afford to miss the scientific sections, the scientific exhibits, the exhibits in preventive medicine work, even the commercial exhibits which will be at his service in Detroit in June.

There are many other reasons why the doctor should go to this meeting. He will meet with many friends, he will make many new friends, and from many of these he will learn more or less of value. He will see and hear men whose books and articles he has been reading for years, and in their presence he will be able to form a more just estimate of their real value. No one can live to himself alone; especially is this true of the practitioner of medicine. He cannot stand still intellectually. He either retrogrades or progresses, and in order to progress he must come in touch with the best that there is in the profession, and this he will find at the meeting of the American Medical Association.

There are still other important reasons

why every medical man in Michigan should attend the A. M. A. meeting. The intelligent people in your community expect you to do so. They demand that their doctor should be up to the times, that he should be among the best, and that he should not become fossilized. I have no doubt that there are other reasons why every medical man in Michigan should attend the American Medical Association meeting, but it seems to me that any one of the above given should be sufficient. Let Michigan turn out in toto. Let every one of the three thousand or more physicians in the state meet with his fellows in Detroit in June and be rejuvenated, refreshed and a better doctor when he returns to his home.

V. C. VAUGHAN, SR.

Secretary's Note: The above editorial written in 1916, when the American Medical Association met in Detroit, is very much to the point for the 1930 Detroit session of the A. M. A.

PRESIDENT BROOK ADVISES

The American Medical Association will hold its 1930 meeting in Detroit from June 23 to 27 inclusive.

Michigan men particularly should avail themselves of this opportunity to attend this great national Medical gathering because Detroit is easy of access over splendid roads or a few hours ride provided by excellent train service. It serves as a convenient stopover for those who expect to take an eastern or Canadian motor trip. Hotel accommodations are ample and no visitor to the convention need fear of being left to sleep on a park bench. A wise man, however, makes a reservation at the hotel of his choice and I would so advise every doctor expecting to attend. A list of hotels and their prices is published in this issue for your convenience.

The scientific exhibit is one of the outstanding features of the convention. Here may be seen, and explained by trained attendants, the latest advances in scientific medicine, embracing pathology, X-ray, laboratory diagnosis and treatment. If one so desires, his entire time may be spent with profit, inspecting the various exhibits presented. Physicians generally declare that at no other medical gathering is there such a variety of material brought together under one roof.

All of the meetings, as well as the Commercial Exhibit and the Scientific Exhibit,

will be housed at the Masonic Temple. This arrangement will prove exceedingly convenient in view of the fact that one need not travel several blocks to hear a speaker at a different section meeting than the one in which he is most interested. Lunch may be obtained in the Masonic Building Cafeteria, obviating the necessity of leaving the building from arrival in morning until the day's program is finished. Each annual gathering also brings many class reunions, fraternity dinners, etc., which serve to bring together men who have since graduation been separated. Here is an opportunity to swap experiences and renew acquaintances.

Michigan doctors should begin to plan *now* to attend the most complete, scientific and instructive medical meeting ever put on anywhere in the world. The very latest and newest medical thought of the masters in the art and science of medicine and surgery will be dispensed for your edification and instruction. It will be a treat not only for the ocular and oral senses, but through them it will serve as a rejuvenation of the mental forces which have become weary through the long hours and days in administering to physical and mental needs of the public. It is a three months postgraduate course given in five days.

Not only can we acquire new knowledge from the presentation of the scientific discourses but my personal experience in attending these meetings has been that many valuable hints may be picked up through casual shop talk in the hotel lobby or on the street with men from various parts of the country.

Aside from the Convention features, Detroit offers a wide variety of interesting diversions. Belle Island, a most outstanding beauty spot of the country, offers a pleasing day's recreation. Various boat trips may be made by those who love the water. The New Ambassador bridge, automobile plants, various pharmaceutical houses and their biological plants—all may be visited and inspected with profit and pleasure.

Detroit committees are hard at work arranging every detail so that there need not be a dull moment for anyone during the entire week. Particularly are they endeavoring to put on most instructive clinics at the various hospitals, conducted by the greatest talent in the country.

Come to Detroit the last week of June

and stay the entire week. Treat yourself to the greatest medical feast conducted yearly by the American Medical Association and backed by the greatest body of Scientific men in the world.

J. D. BROOK.

ANNUAL MEETING SEPTEMBER 15-16-17

At a joint conference of the Executive Committee and section officers the date for our 1930 Annual Meeting was designated as September 15-16-17. The House of Delegates selected Benton Harbor as the place of meeting. Members desiring to participate in the scientific program should write to their section officers.

LEGISLATION

Did your Senator or Representative vote against the Basic Science bill and for the cult legislation at the last session of the legislature? If so, have you discussed the matter with him? Is he a candidate for reelection? The recommendation is made that each county society through the proper committee, and also the members individually, should interview these legislature members and so provide them with real facts. This local activity is essential. It should not be neglected.

MEDICAL-LEGAL DEFENSE REGULATIONS

In case a member is threatened with suit or suit is instituted, the following procedure should be observed:

Report all the facts to the medical-legal representative of your county society. Jointly send in a detailed report to Dr. F. B. Tibbals, Chairman, Kresge Building, Detroit. Do not delay making these reports. Send them the very day you learn of a threat or are served with a court notice. Do not engage or consult any attorney. Do not discuss the case with anyone. Do not attempt to make explanations. Withhold all comments, be firmly reticent and be guided by the instructions received from Dr. Tibbals, who will protect your interests and provide you with legal counsel.

These points are called to our members' attention and their observance stressed. Rigid compliance insures better protection.

REORGANIZED INGHAM COUNTY

So much notoriety and wide publicity was given the recent disbanding of the Ingham County Medical Society and the reorganization of a new society, that we believe a statement of the facts would do much to clear the many vague rumors and speculations that have been rife throughout the country. As long ago as 1926 certain members of our County Society felt a house cleaning was advisable; a few members, we believed, added no honor or dignity to our organization. It was common knowledge that grossly unethical and unprofessional conduct existed among us, though evidence enough to convict was hard to obtain. On one or more occasions evidence was gathered and hope of successful prosecution was high; witnesses, however, became strangely disinterested or their memories became poor.

The Koch Cancer Foundation had its followers and several cases of grossly unprofessional practices, and downright dishonesty were widely known. Specific cases were hard to prove, so expulsion of these certain offenders seemed a difficult step. Many conferences were held and finally it was decided to disband the Society, give up the charter, reorganize, leaving out of the new reorganization the undesirables.

Fifty or sixty members had been advised of this move and most of them had been in actual conferences on the matter. A meeting was called to disband the Society. The newspapers, sensing a story, rushed out to interview the officers. The secretary (evidently) first gave out the news that fee splitting was the burning question of the day and the cause of disbanding. Wide publicity was given this interview, making it appear that the Society was in a state of civil war over this question; many conjectures were made by the papers suggesting that two or even three Medical Societies might be formed. At the meeting the following day many of our members were highly indignant over what they termed misleading and totally erroneous publicity. These men expressed themselves rather heatedly on the subject.

Information leading up to the cause of disbanding was not given out during the meeting. A motion was made and carried to appoint a committee to report on the advisability of disbanding. This committee

brought in a favorable report to disband two weeks later. The report was adopted by a vote of fifty-seven to fifteen. The Ingham County Medical Society then ceased to exist.

The publicity caused a great deal of loose talk, gossip if you prefer. Self appointed committees picked over the habits, practices, personalities, and characters of the entire profession of our County. The writer attended several of these meetings and raised a protest against the methods in use—proof was not required to eliminate a name from the eligibility list, a mere statement of leave him off or he's no good was sufficient. Fee splitters were named on vague hints and insinuations and in one instance, at least, a man was convicted because he had built a good surgical practice in a comparatively short time.

At this time the original issue was lost sight of and fee splitting and fee splitters was the topic of the day wherever physicians gathered. As one prominent surgeon after seeing a list of eligibles remarked, it seems only surgeons are fee splitters, they must be splitting among themselves and not with the referring physicians. One or two men openly remarked that an abortionist was as good as a fee splitter. During this whole period no one seemed to have the presence of mind to look up a definition of fee splitting as outlined by the A. M. A. They were too busy listening to the gossip about the other fellow.

The whole situation was so unhealthy and potentially dangerous that several men of unquestioned ability and character and who were acceptable to all of the committees refused to have any part in the proposed reorganization. Immediately following the disbanding of the old Society, a committee of fifteen men who had practiced in Ingham County from fifteen to thirty years was formed to reorganize a new Society. Care was taken in choosing this group. No man whose character or practices (fee splitting, etc.) had been doubted or even hinted at was allowed to serve. This committee met, formed, and temporary officers were elected and then proceeded on its plan of reorganization.

Two men who served on this committee and found it to be too conservative for them, quietly called a committee of their own choosing, held a meeting, and organized the Lansing Academy of Medicine. Twenty-

four men whose average years of practice was under four years were invited to attend, a constitution and by-laws were adopted and officers elected and a charter was applied for. They then invited twenty to twenty-five more men to meet with them and subscribe to the constitution and by-laws, that they had no voice in helping to frame. Their letter of invitation stated that one of the unquestionable evils of medical practice was ignored by another proposed method of reorganization (meaning the committee referred to above and since this committee had made no report we felt this statement was premature). Many of the men invited to this meeting refused to go, not wishing to approve of the move by their presence. At this meeting seven physicians denounced the methods used by this group, the policies involved and the innuendos inferred in their general plans. This meeting was reported in the press as a forward step in medical organization in Ingham County.

The older committee continued its work and met two days later, inviting all the eligible members of the old society together with the newly organized Lansing Academy of Medicine to share in their deliberations. Constitution and by-laws were adopted and officers were elected. The committee on presenting the constitution and by-laws offered the following report:

Your committee has not been unmindful of the great responsibility placed upon them in drafting this constitution and by-laws. In writing this we have adhered closely to the model constitution as prepared by the A. M. A. Changes have been made to meet local conditions; we wish particularly to call your attention to that part of the by-laws that pertains to eligibility for membership. We have defined fee splitting and what constitutes fee splitters and what is not fee splitting. These definitions have been taken from the transactions of the House of Delegates of the A. M. A. There may be those among us who will say that this is not enough; to them we will say that we believe that we have gone farther than any County Society in the State—farther, in fact, than the Michigan State Medical Society and the A. M. A. demand. And since we are to be a component part of those societies we must be governed by their rules, practices and laws. The ideals, pledges, and usages of other organizations of whatsoever character we believe are not

required or even wanted by our State and National Societies. We believe they want as many good honest physicians in every community who will adhere to the high ethical and professional standard as outlined in this constitution and by-laws.

In presenting this for your approval we offer the best thought of our group, hoping that after its adoption the atmosphere may be cleared of the fog that has surrounded us during the past several weeks and that we may again raise our heads to receive the respect of this community, to which a harmonious, united, medical profession is entitled.

The Medical Society of Ingham County then invited Dr. B. F. Green, Councilor, to meet with us and his help was asked in securing a charter. At this meeting the Secretary of the Lansing Academy of Medicine announced the disbanding of the organization and the coöperation of its members, only, however, after taking credit for the strict wording of the constitution which they had no part in framing.

Looking back over the whole sad affair one cannot fail to see the cause of the scandal, overzealous, inexperienced men who rushed into print on every occasion possible, leading the public to believe that there were those among us who would suggest and insist upon operating on everyone who had one hundred and fifty dollars whether or not surgery was indicated. This, of course, is a slander of the profession of this County and State.

Some good may come from it as the men of judgment are determined that they shall keep such close watch on the affairs and policies of the Society that nothing like this disgraceful, untruthful, and wholly unwarranted event will ever occur again.

L. G. CHRISTIAN, President.

The Ingham County Medical Society is a thing of the past. This Society was disbanded by a vote of its members at a meeting early in March, following the recommendation of a committee which was appointed to investigate the feasibility of such an act.

For the past few years the Society had been rather inactive, many of its members were dissatisfied, and frequently remarked that the old Society was not exactly what it might be, and that we kept members in

good standing whose practices and ethics were not worthy of protection.

In addition to this we did not seem to have an adopted constitution, members were serving on committees from year to year with dues unpaid, and the entire organization was in chaos.

During the preliminary meetings and impromptu discussions, which of necessity arose before disbanding could be accomplished, many opinions were expressed regarding illegal practices and fee splitting, but when the regular meeting of the Society took place, the motion to disband was carried, and we found ourselves without a local Society.

Several attempts were then made by selected groups to start reorganization on a proper basis. Outstanding of these groups was one of about twenty-two members, who met rather suddenly and perhaps somewhat secretly, paid in their dues, elected officers, pledged themselves on an absolute non-fee splitting basis, adopted a constitution and applied for a charter.

This action met with general disapproval by approximately sixty local doctors, including particularly the older members of the profession. These men, therefore, selected a committee, drew up a model constitution and by-laws, called a meeting of all the local doctors, adopted this constitution, elected officers and applied for a charter. The name of this organization is, "Medical Society of Ingham County."

About seventy doctors signed this new constitution, and following this action the Secretary of the previously formed "Lansing Academy of Medicine" read the following announcement:

At the time that the Ingham County Medical Society was disbanded, there was a difference of opinion as to how far steps should be taken in raising standards of membership in the subsequent organization. The younger group felt that the fee-splitting issue should be squarely met, and for that purpose they banded themselves together, adopted a constitution and became known as the Lansing Academy of Medicine. The object in view at that time was that this organization should in a short time comprise practically all of the physicians in Ingham County. This group felt that some, if not many, of the acknowledged fee-splitters would welcome an opportunity to

abandon the practice and join this organization.

Last Thursday, a larger group of physicians met to organize the Medical Society of Ingham County, and at that time adopted a constitution which in a general way embodies the ideals which prompted the formation of the Lansing Academy of Medicine. The Academy members at that meeting felt that at least those physicians who were responsible for the formation of the new organization would make a sincere effort in enforcing the provisions of that constitution.

The Academy members have no desire for a duplication of organizations which have the same purpose, and on the contrary are extremely desirous of a united, ethical profession. Because of the efforts of the Medical Society of Ingham County to raise the ethical standards of the profession and with the understanding and belief that the Society would conscientiously endeavor to enforce the provisions regarding unethical practice, the Lansing Academy of Medicine voted to recall its application for a charter, and also voted to disband in order that its members might give their undivided and whole-hearted support to the Medical Society of Ingham County.

As a result of this action we feel that we now have a real working organization. Interest in membership has been stimulated and individuals who felt that the local Society was not worth while have evidently come to realize that membership in such an organization is of prime importance and well worthy of their consideration.

Trusting this gives a rather accurate description of what has transpired in Ingham County, and assuring you of a wide awake organization which will be heard from later, I remain,

Sincerely yours,

C. F. DeVRIES, Secretary.

MINUTES OF THE EXECUTIVE COMMITTEE

The Executive Committee of the Michigan State Medical Society met in Grand Rapids at 6:00 P. M. on April 10, 1930.

Present: Chairman R. C. Stone, J. D. Bruce, B. R. Corbus, Henry Cook, Geo. L.

Le Fevre, B. F. Green, President J. D. Brook, Secretary F. C. Warnshuis, and Chairman of the Legislative Committee John S. Sundwall.

Upon motion of Bruce-Corbus, the Secretary was directed to arrange with the publisher for 700 sets of a Medical History of Michigan.

Councilor Green reported upon the reorganization of the profession of Ingham County and upon his recommendation by motion of Le Fevre-Corbus, the Secretary was directed to issue a charter to the Medical Society of Ingham County.

The Secretary presented the question as to who shall preside at the complimentary dinner to be given to the officers of the House of Delegates of the American Medical Association. Upon motion of Cook-Bruce, the selection of the presiding officer was left to the President, Dr. Corbus and the Secretary.

Upon motion of Corbus-Bruce, the program for the Post Graduate Conference for the Second District was approved and financial expense to be assumed in accordance with the motion passed at the last meeting of the Executive Committee.

Upon motion of Corbus-Le Fevre, the Secretary was instructed to use discretionary judgment in the matter of suspending members for the non-payment of their dues for the current year.

Dr. Sundwall outlined the work that had been accomplished by the Legislative Committee. Some two hours were spent in the discussion of our legislative problems and upon motion of Corbus-Cook, the Secretary was directed to arrange for a special conference to be held at the Michigan Union in Ann Arbor on May 16th. The Secretary was further directed to call a special meeting of the Council of the Michigan State Medical Society to convene in Ann Arbor on the afternoon of May 15th.

The meeting adjourned at 10:30 P. M.

F. C. WARNSHUIS, Secretary.

INSURANCE REPORTS

A number of complaints have been made to the Chairman of the Civic and Industrial Relations Committee, Dr. Harrison S. Collisi, 1522 G. R. National Bank Bldg., Grand Rapids, Michigan, that certain Health and Accident Insurance Companies

are declining to honor statements rendered by physicians for filling out preliminary and final claim proofs.

The home office of every insurance company authorized by the Michigan State Insurance Department for the transaction of business has been notified of the action taken and a copy of the resolution, which was passed at the annual meeting in Jackson, September 17, 1929, mailed to them.

Physicians are urged by the committee to render a statement to the insurance company and attach it to each preliminary and final claim proof when filling these out for claimants. In case of a refusal to pay, it is recommended that physicians immediately notify the Chairman of this committee and decline to fill out further proofs of claim for insurance companies who continue to refuse payment for services rendered. In this way only, can satisfactory results be obtained.

It is expected that some of the insurance companies will soon issue policies providing for the payment of all fees to physicians for filling out preliminary and final reports.

H. I. C.

HAVE
YOU
SENT
YOUR
SUBSCRIPTION
for
a
MEDICAL
HISTORY
of
MICHIGAN?
DO
IT
TODAY.

COUNTY SOCIETIES

BARRY COUNTY MEDICAL SOCIETY

At the February meeting a paper was read by Dr. V. Eman on "Relation of Dental Infections to Systemic Diseases."

At the March meeting a paper was read by Dr. J. C. Foshee on "Gall-Bladder Diseases."

C. S. McINTYRE, *Secretary*.

LENAWEE COUNTY

The March meeting of the Lenawee County Medical Society was held at the Adrian City Club on the evening of March 20. Dinner was served at 6:30 P. M. to nineteen members of the society and two visitors. Two other members came in later to the scientific part of the program.

After dinner we adjourned to the third floor, where we listened to an excellent presentation of the subject of "Borderline Abdominal Cases" by Dr. Frederick W. Collier, chief of the surgical staff of the University of Michigan. The speaker leaned distinctly toward the conservative medical treatment of many abdominal conditions where the pathology is not clear, or in such cases as chronic appendicitis which have never had an acute attack, mild gall-bladder infections, and peptic ulcer. This part of the talk was preceded by a plea for early diagnosis and early gastrectomy in gastric cancer.

After Dr. Collier's talk, we were treated to a surprise which the secretary had not provided in a talk very lucidly explaining the modern treatment of varicose veins as carried out at the University Hospital. This consists of injection of the veins according to a very simple technic by 50 per cent glucose and 30 per cent Sodium Chloride, or in some cases by 30 per cent Sodium Salicylate, with the patient constantly ambulant. Slides were used by both Dr. Collier and Dr. Maddock, who described the latter treatment.

Everyone felt that this was one of the evenings affording more common sense than the usual scientific discussion, and was accordingly more profitable.

C. H. WESTGATE, *Secretary*.

ST. CLAIR COUNTY

The regular bi-monthly meeting of the St. Clair County Medical Society was held March 18, 1930, at the Harrington Hotel. The St. Clair County Dental Society were our guests for dinner, and remained for the scientific program. Following the business meeting the Superintendents of the City and the Contagious Hospitals, as well as the nurses in training and graduates, also came to hear our speakers.

We were fortunate in having Dr. Guy Kiefer and Dr. Young of the State Board of Health, who gave talks on Preventive Medicine and a résumé of the work of the Biological Laboratories of the State.

Both talks were very interesting and those who heard them were given a very concise and clear exposition of what our State Health Department is doing for the people of Michigan, through their own medical advisors.

A good discussion followed and as a result it is safe to say that many of us know much more of the manufacture and methods of handling biological products than we did before.

Members from Yale, Capac, Marlette, Marysville and Marine City were in attendance.

HILLSDALE COUNTY

The regular meeting of the Hillsdale County Medical Society convened at the Orange Lantern Tea Room, Hillsdale, Tuesday, March 25, 1930, at 6:30 P. M.

The veterinary surgeons of the county were invited to join us and a number of physicians and veterinaries of Branch County were present; also Dr. C. H. Westgate of Morenci, Michigan. After an excellent dinner, the President, Dr. Poppen, called the meeting to order and introduced Professors Huddleston and Killam of Michigan State College, who addressed the joint meeting very interestingly and instructively on Malta fever, its prevalence, distribution, and the means, so far as known, of its prevention and control. Many questions were asked and answered.

After the discussion the Doctors were tendered a rising vote of thanks by the society. Dr. Fenton then read a paper on "The Prophylaxis and Treatment of Lobar Pneumonia."

General discussion.

It was moved, supported and carried, that Dr. Fenton's paper be tendered to the Journal of the Michigan State Medical Society for publication.

After this, under the head of miscellaneous business, the society voted to hold our meetings on the last Tuesday of each calendar month except July and August, during the year; and to invite our colleagues in nearby counties to join in the meetings.

Adjourned.

D. W. FENTON, *Secretary*.

MONROE COUNTY

Monroe County Medical Society has had good attendance at meetings so far this year. Programs have been varied and interesting.

On January 16 the society enjoyed films on gastrointestinal action and the effect of drugs on it.

On February 20 Dr. John J. Corbett of Detroit gave an illustrated lecture on "The Treatment of Rectal Fistulae." There was an interesting discussion of revision of the fee-bill.

March 20, Dr. Stuart Pritchard of Battle Creek spoke on "The Significance of Cough." Dr. Pritchard insisted on stopping at the end of twenty minutes, and the audience was loath to let him go at the end of that time.

FLORENCE AMES, M.D., *Secretary-Treasurer*.

GRAND TRAVERSE-LEELANAU COUNTY

The regular meeting of the Grand Traverse-Leelanau County Medical Society was held at the J. D. Munson Hospital on Tuesday, February 4, 1930, at 7:30 P. M.

The minutes of the January meeting were read and approved.

E. F. Sladek gave a report of his attendance at the Annual Conference of Secretaries.

Four reels of motion pictures, "The Surgical Treatment of Peptic Ulcer," were shown. These reels were shown by the compliments of the Davis and Geck Company. Dr. M. J. Holdsworth gave a very fine report on the post-operative treatment of gastric surgery.

A short reel showing Walter Hagen in action was also shown.

The meeting was adjourned after considerable general discussion.

E. F. SLADEK, *Secretary*.

MARCH MEETING

The regular meeting of the Grand Traverse-Leelanau County Medical Society was held at the J. D. Munson Hospital on Tuesday, March 4, 1930,

at 7:30 P. M., with the following members present: Drs. Way, Hastings, M. Holdsworth, Minor, Sheets, Holliday, Gauntlett, Kyselka, Sladek, and Thirlby, with Dr. Evans as guest.

Minutes of the February meeting read and approved.

On motion, Gauntlett-Hastings, the president is to appoint a committee to investigate and buy a motion picture projector. Passed. This was done because of the interest shown in medical movies and because of the poor quality of available projectors. The president appointed E. F. Sladek and M. J. Holdsworth on this committee.

Three reels of the motion picture, "Indirect Inguinal Hernia," were then shown. Considerable discussion followed.

E. F. SLADEK, *Secretary*.

MANISTEE COUNTY

The Manistee County Medical Society met March 18 at Mercy Hospital and enjoyed a 6:30 dinner, following which Dr. S. C. Moore, Wexford County Health Officer, and Anna Marie Nelson, Wexford County Nurse, gave splendid talks. They described in detail the very complete Health Unit recently organized in Wexford County and explained its functions and its benefits.

Members of the committee locally known as the Cousins Fund Committee (Michigan State Child Health Fund) were present to hear Dr. Moore's address. Much interest was shown by the members of this committee and also by the members of the Dental and Medical profession present. An endeavor to establish a health unit in the county is on foot and the Medical Society goes on record as wholeheartedly approving the plan to install a County Nurse as the first step and nucleus for a more complete county unit.

When this has been accomplished this county is eligible for its share of the money being distributed by the Michigan Children's Health Fund (Cousins Fund).

JACKSON COUNTY

The February meeting of the Jackson County Medical Society was held Tuesday evening, February 18, 1930, at the Hayes Hotel. Dinner was served at 6:00 o'clock, following which President Cooley called the meeting to order.

The minutes of the previous meeting were approved as published in the Bulletin.

There was a general discussion by several members present of the smallpox situation and the various methods of handling vaccination. The general consensus of opinion was that the trouble lay in the lack of coöperation between the Health Department and the various members of the Medical Society. It was also brought out that the Health Officer has not been a member of the Medical Society for several years past.

In order to bring about closer coöperation between the Health Department and physicians in general, motion was made and seconded and passed unanimously as follows: That the Society give Dr. Town an honorary membership and a season ticket to all the scientific meetings for the year 1930. The Secretary was also instructed to write to Detroit and to Holland, Michigan, about their system of handling this situation.

President Cooley then turned the meeting over to the chairman for the day. Dr. Munro was absent from the city, so Dr. Riley acted in his place. Dr. Riley introduced as speaker Dr. J. D. Mathews of Detroit.

Dr. Mathews chose as his subject, "The Use of the Cautey in the Treatment of Accessible Cancer."

He gave a very interesting paper on the technic and results obtained by use of the cautery in these conditions. His talk was very much enjoyed by all those present. After some discussion on this subject the meeting adjourned.

Attendance forty-seven.

GRATIOT - ISABELLA - CLARE COUNTY

The March meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright House, Alma, Thursday, March 13. Eighteen members and two visitors had dinner together.

The minutes of the previous meeting were read and approved, after which President Mudge introduced Doctor R. C. Moehlig of Detroit, whose subject was "Endocrinology from a New Angle."

By using lantern slides and charts the Doctor took up the subject from an Embryologic angle, showing which glands and tissues are developed from the Ectoderm and which from the Mesoderm—then from this showing how these same tissues are influenced by the Hypo- or hypersecretion of the different glands. From a therapeutic standpoint the only one that can be influenced much is the thyroid.

Doctor Moehlig answered questions freely and there were many comments afterward to the effect that the Doctor made this a very interesting and practical meeting.

Meeting adjourned.

E. M. HIGHFIELD, *Secretary*.

KALAMAZOO ACADEMY OF MEDICINE

The regular meeting of the Kalamazoo Academy of Medicine was held February 18, 1930, in the Academy Rooms. About fifty members were present for dinner.

The meeting was called to order by the president, Dr. J. C. Maxwell.

The minutes of the January meeting as printed in the February Bulletin were approved.

There were no committees to report at this meeting.

Dr. A. W. Crane showed X-ray showing unusual findings in a patient with gall stones.

A letter from the Professional Underwriters Insurance Company was read. Dr. C. L. Bennett moved that this be laid on the table indefinitely. Seconded. Carried.

A letter from Dr. Warnshuis regarding the Medical History of Michigan, which will be published soon, was read. Dr. Jackson moved that the chair appoint two members to solicit orders. Seconded. Carried. (For the benefit of those who were not at the meeting this letter is reprinted in this Bulletin.)

Dr. Boys moved that the chair appoint a committee to draw up resolutions on the death of Dr. Beebe. Seconded. Carried. Dr. Maxwell appointed Drs. McNair, Boys and Crane on this committee.

Dr. Crum asked Dr. Rockwell to review his plans for immunization against diphtheria which he presented at the last meeting. In brief Dr. A. H. Rockwell's plan was to have each physician set aside certain hours or days when he will be willing to give the necessary injections for one dollar each. This corresponds to a plan which was adopted by the Wayne County Medical Society.

Dr. F. E. Andrews moved that we adopt this plan for an indefinite period. Seconded. Dr. Bennett wished to amend the motion to read \$1.50 for each injection. Seconded. Not carried. Original motion carried.

Circular letters will be sent to the physicians by the City Health Department.

Miss Florence Fiske explained the new recommendation cards which have both the Red Cross and the Academy seal. It was moved by Dr. Collins that the Academy bear \$4.00 of the expense incurred, that being approximately the extra cost for the official academy seal. Seconded. Discussed by Dr. Barrett. Motion carried.

Dr. John Alexander, Assistant Professor of Surgery in the University of Michigan Medical School, gave a very instructive discussion on the recent developments in chest surgery. The talk was well illustrated by lantern slides. This was discussed by Drs. Boys, Pritchard, Shackleton, Shepard, Jackson, Stryker, F. E. Andrews and Hanna.

Meeting adjourned.

OAKLAND COUNTY

The monthly meeting of the Oakland County Medical Society was held at the Pontiac City Hospital on Thursday, February 20, 1930, the meeting being held in conjunction with the regular Staff Meeting of the Hospital.

Following luncheon the meeting was called to order by Dr. E. V. Howlett, President of the Pontiac City Hospital Staff, who then called upon Dr. B. M. Mitchell, to transact the necessary business of the O. C. M. S.

A communication from the Riker Building was read offering the Society space in that building for library or club rooms at a nominal cost to the Society of \$1.00 per year. It was moved by Dr. Robert Baker that the proposition of the offer of the Riker Building be referred to the Board of Directors. The motion was supported and carried.

It was moved by Dr. Howlett that the Oakland County Medical Society present a petition to the City Commission, requesting that the name of the Pontiac City Hospital be changed to the Pontiac General Hospital. The motion was supported by Dr. Fred Baker. Carried.

Dr. Howlett then resumed the chair and called upon Dr. F. A. Baker, Chairman of the Program Committee, to present the program.

The following papers were read:

"Multiple Neurofibromatosis," Doctors George A. Sherman and R. H. Baker.

"Traumatic Paralysis," Dr. Edward Howlett.

"Toxemia of Pregnancy," Dr. H. A. St. John.

"Prostatic Hypertrophy," Dr. L. F. Cobb.

BAY COUNTY

The speakers thus far this year have provided very unusual programs of interest. They are as follows:

Dr. Harthar Keim, Detroit.

Dr. G. W. Gamble, Jr., Bay City.

Dr. C. E. Boys, Kalamazoo.

Dr. John Davis, Toledo.

Dr. John Alexander, Ann Arbor.

Dr. Cyrus C. Sturgis, Ann Arbor.

Friday evening, May 9, the Bay County Society will be host to an Inter-City meeting at Fisher's Hotel, Frankenmuth, Michigan, to hear Dr. George Crile, Cleveland. An old-fashioned chicken dinner will precede the meeting at 7 P. M.

L. FERNALD FOSTER, *Secretary*.

BERRIEN COUNTY

The Berrien County Society met in Niles on March 27 at the Four Flags Hotel. Entertainment for the dinner, which was attended by twenty-six members, was provided by the Niles doctors.

A short business meeting was held at which President McDermott announced the final committees for the state meeting to be held in Berrien County in September. The Secretary called attention to the request for subscriptions to the History

of the State Society and passed out the blank orders to be filled out and mailed to Dr. Warnshuis.

The first paper was a treatise on intestinal obstruction by Dr. Francis Greene of South Bend. Dr. Greene was a former Cass County boy and following his fellowship at Mayo's located in South Bend, where he is practicing surgery. A very representative group of Cass County physicians was at the meeting to hear his paper, which was well presented. The speaker stressed particularly early diagnosis and operation early, expressing the dictum "better unnecessary than too late." Also the advantages of spinal anesthesia in such cases, and the drainage of the obstructed bowel by the stripping and trocar method of removal of toxic fluid. The value of hypertonic saline to combat toxemia and shock. His paper was well received and the discussion which followed was quite valuable. Dr. A. J. Giradona, pathologist of Epworth Hospital in South Bend, gave a concise discussion of the paper from the pathologist's viewpoint, the ultimate diagnostician, in so many of these cases.

Dr. Giradona is always an interesting discussant and his ability at summarizing brought out many important features of Dr. Greene's paper.

Several case reports of obstruction were brought into the discussion by the other members of the Society which proved to be extremely interesting.

Dr. N. A. Herring, of Niles, gave a short talk on the findings of Drs. Coffee and Humbert in their recently brought out treatment for cancer. Dr. Herring chanced to be visiting in California at the time and had the good fortune to be present at the clinics and demonstrations of these cases. His description of the character of these men, and the incidents leading up to the widespread newspaper publicity, and the Fishbein repudiation were very interesting. Dr. Herring feels that the demonstrations, while not conclusive, showed some decidedly specific results in the relief of pain and the subsidence of tumor swellings, and he feels that these men should be given every encouragement in their work. The ethical difficulties under which they were laboring and the public interest makes their task stupendous.

The April meeting of the Berrien County Society will be held in St. Joseph at the Hotel Whitcomb on April 16. Dr. J. D. Brook, President of the State Society, and Dr. F. C. Warnshuis, Secretary, will be the essayists for the evening.

W. C. ELLET, *Secretary.*

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. L. J. HARRIS, President, Jackson, Mich.
MRS. J. EARL MCINTYRE, Secretary, Lansing, Mich.

MICHIGAN STATE MEDICAL SOCIETY WOMAN'S AUXILIARY

At a meeting of the executive board of the Woman's Auxiliary Michigan State Medical Society held a few weeks ago Mrs. Harris, president, appointed Mrs. Guy L. Kiefer, our past president, to act as State Organizer. Mrs. Harris is desirous of having as many new auxiliaries organized as possible before the national meeting at Detroit in June. Pontiac, Oakland County, has already invited Mrs. Kiefer to attend a

dinner they are giving and at that time assist them to organize an auxiliary. Any other counties wishing to have Mrs. Kiefer assist them have only to write Mrs. Guy L. Kiefer, Hotel Olds, Lansing, and Mrs. Kiefer will be delighted to do everything in her power. It is the wish of Mrs. Harris to accompany Mrs. Kiefer on some of these trips so that she may become better acquainted with the doctors' wives throughout the state.

We hope that as many members as possible from the various county auxiliaries will attend all or as many meetings of the Woman's Auxiliary American Medical Association to be held in Detroit, starting June 23. It will be a fine opportunity to learn more of the aims and ideals of the auxiliary and also to meet the national leaders. It is an opportunity that we shall probably not enjoy again for some time.

At the medical meeting of the second counselor district comprising Ingham, Jackson and Hillsdale Counties, to be held at Lansing, Thursday, April 24, the members of the Woman's Auxiliary of Ingham County have signified their willingness to assist Dr. J. Earl McIntyre, Chairman of Registration and Reception Committee. Here is an opportunity to show just what we can do. The auxiliary will have charge of the registration and information desks.

ANNA HOWARD SHAW, M.D.

Feb. 14, 1930.

Dear "Auxiliary" Women:

This evening the Woman's Medical College of Pennsylvania is holding a great dinner in the ballroom of the Bellevue-Stratford Hotel in Philadelphia to raise funds for the extension and permanent support of their Anna Howard Shaw Department of Preventive Medicine, which was founded in 1926. Among the speakers at this dinner will be Mrs. Carrie Chapman Catt, long a co-worker of Doctor Shaw, and Mrs. Ruth Hanna McCormick, Congressman-at-large from Illinois.

Today is the anniversary of the birth of this great woman who spent much of her youth as a pioneer in the North-Michigan woods, and who was a student at Big Rapids high school and Albion College. Later she became known the world over as a most eloquent advocate of woman suffrage. She was the leader of the National Woman Suffrage Association when the vote was finally won. She was known also as a great temperance worker and a preacher of remarkable eloquence and power. But I wonder how many of you know that she had two warrants for her title of "Doctor," and that one of them she received from the Medical Department of Boston University.

This is how it came to pass: In 1880, Miss Shaw, having graduated from the Theological department of Boston University, the only woman in a class of forty-three, was assigned, as a licensed minister of the Methodist Church, to a parish on Cape Cod. She quickly was convinced that the

work she wanted to do among the poorer and more neglected of her flock could be much more effectively done if she knew how to help their bodies as well as their souls. So, back to the University she went, to take the full medical course, which was not so long then as now. Thus she became a real medical missionary—a pioneer in that field—finding her place in her own country instead of far over-seas.

This was the first phase of a dedication to public service which can almost be said to have had no bounds, but whose emphasis was along the line of toughest resistance—almost of obloquy in that day—the political emancipation of women.

The National League of Women Voters is just now preparing to celebrate its tenth birthday by the creation of a Memorial Fund to support and extent its future work. This fund is to be in commemoration of those women who have been of outstanding importance in securing justice and equal opportunity for women. I had the honor of suggesting to the Michigan State League of Women Voters that it present the name of Anna Howard Shaw as one of three women to be placed at the head of the National Roll of Honor about to be created at Washington. Our nomination has been confirmed, and the three names thus honored are: Susan B. Anthony, Anna Howard Shaw, Carrie Chapman Catt. Beneath these names will appear those of carefully-selected women from all parts of the United States who have devoted themselves wisely and wholeheartedly to advancing the cause of women.

No name could better deserve to be at the head of such a list than that of Doctor Anna Howard Shaw. The nation owes her gratitude (and we in Michigan can take pride) for much more than suffrage. After equal political rights were finally won—she had campaigned for the ratification of the Federal Woman Suffrage Amendment in every one of the forty-eight States—she sought to retire for a greatly needed rest. But almost immediately she was drafted by the Secretary of War, Newton D. Baker, to mobilize and lead the forces of American womanhood in the Women's Committee, Council of National Defense. To this great task she gave such ability, energy and enthusiasm that she was awarded the Distinguished Service Medal at the close of the War. But not even then could she be spared from service. Her death came in 1919 from pneumonia contracted while touring the country as the chief exponent of The League to Enforce Peace sponsored by former President Taft.

At Albion College we are to hold a great commemorative celebration in Doctor Shaw's honor on the evening of February 17. This afternoon the girls held a commemoration tea in beautiful Susanna Wesley Hall, in which we tried to call up the times and events when she was a student there more than fifty years ago. At Kalamazoo we held a somewhat similar service yesterday. So, yesterday, did the students of Ferris Institute in Big Rapids. Next July, at a great Homecoming Celebration of their first seventy-five years, Big Rapids will devote a day to the memory of Anna Howard Shaw, and I shall be permitted to speak of her in the beautiful new Methodist church on the site of the one which she used to attend, and where she first felt her call to preach.

At Paris, a few miles from Big Rapids (where is now the State Fish Hatchery), was once the little log cabin of the Shaws in which Anna and her mother and sisters carried on a difficult and ad-

venturous life while father and brothers were fighting in that other Great War. Here in Paris they have a plan: It is to re-erect that same log cabin and re-create all its surroundings just as they were when Anna was a young girl and lived her brave life and dreamed her brave impossible dreams of world service—which all came true!

So, it seems to me suitable that the wonderful record of this life, including her little-known but lately honored services in the field of Medicine—should be brought now to the minds of Michigan women who are themselves trying to do something indirectly for the advance of the healing art.

Faithfully yours,

HARRIET BARTLETT CRANE.

WOMAN'S AUXILIARY TO THE BAY COUNTY MEDICAL SOCIETY

"The annual meeting of the Woman's Auxiliary to Bay County Medical Society was held on December 11, 1929, at the home of Mrs. A. W. Heric, our President.

After a delicious buffet supper the business meeting and election of officers was conducted by Mrs. Heric.

Mrs. Slattery, who was to inquire as to the need of the little children who are under the Sisters of Mercy care, reported as the little ones were under the age of two years, that stockings and romper materials were most needed. These she had purchased as gifts from our Auxiliary. Mrs. Heric in her pleasing manner thanked the ladies for the honor of being their first President and for their coöperation. She said that the Auxiliary will always be very dear to her and have her great interest.

The officers were elected as follows: President, Mrs. P. R. Urmston; vice president, Mrs. C. L. Hess; Secretary, Mrs. L. F. Foster, and treasurer, Mrs. M. R. Slattery. At the close of the election Mrs. Urmston took the chair. She told us how she had attended the State Meeting when the Auxiliary was formed and had come back to us and with the help of Mrs. Foster had organized the Auxiliary here. In closing Mrs. Urmston thanked the ladies for honoring her in electing her as President. The ladies gave Mrs. Heric a rising vote of thanks for her great efforts in making the Auxiliary a success for the past two years and also for her hospitality of the evening.

Meeting adjourned for a social hour.

The Bay County Auxiliary met February 24 at the home of Mrs. C. A. Stewart. Her home was prettily decorated with spring flowers. Following a lovely buffet supper Mrs. P. R. Urmston, President, conducted the regular business meeting. Several paid dues as this is the beginning of our year.

Mrs. V. L. Tupper, a member, was reported seriously burned. We hope she is getting along nicely.

After adjournment, a social hour at cards was held. Mrs. L. F. Foster, Mrs. E. S. Huckins and Mrs. A. D. Allen held honors.

Mrs. E. A. Wittwer has invited us to hold our next meeting at her home.

RUTH M. ALLEN,
Corresponding Secretary.

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THE IMPORTANCE OF BODY TYPE AND CONSTITUTION IN INFANCY AND CHILDHOOD*

BORDEN VEEDER, M.D.†

ST. LOUIS, MISSOURI

In this decade or period when the programs of our pediatric meetings are filled with papers based upon careful painstaking laboratory and clinical investigation, one rather hesitates to present a subject with an approach from what might be called the philosophical point of view. But having passed through the childhood of my own pediatric life and reached old age—certain privileges are granted or at least are assumed. And so I have chosen to discuss with you certain reflections and observations which from the very nature of the subject cannot be oriented into clear cut pictures of fact with deductions and conclusions of a categorical nature. Nevertheless they are not the product of fancy or imagination and to my mind they are concerned with matters of fundamental importance.

The number of pathological conditions and structural abnormalities which are defi-

nately hereditary in origin are relatively few and unimportant. On the other hand it is true that heredity is almost the exclusive dominating factor in determining the physical make-up of the individuals comprising the human race. Whether an individual is short or tall, thin or fat, muscular or flabby, weak or strong, short-lived or long-lived, emotional or placid, handsome or homely, athletic or sedentary, depends almost entirely upon inherited factors. It is only exceptionally that nutritional or infectious diseases lead to changes which alter to any ex-

*Read before the Pediatric Section of the Michigan State Medical Society, Jackson, Sept. 19, 1929.

†Dr. Veeder was educated at Colgate University but obtained his M.D. degree from the University of Pennsylvania in 1907; he attended the University of Berlin in 1908; he has held a number of hospital appointments, first at the University Hospital of Philadelphia and at St. Louis where he has limited his practice to Pediatrics since 1911. Dr. Veeder is Professor of Clinical Pediatrics, Washington University School of Medicine.

tent the physical constitution or type of body habitus of an individual during his childhood. Even the endocrine disorders, which lead to such striking departures from the average physical types, are in large part familial and hence hereditary in nature and origin.

The work of the Pediatricist has been aptly compared to that of a service station, as he has nothing to do with the origin of the machine for whose care he is responsible. The human machine comes to him fabricated of materials brought together through economic and social influences and with a total disregard of the physical quality of the material entering into the machine. The distressing fact is that as a result of the mass of present day health propaganda—much of which is unsound—undigested popular science, the craze for popular health books and the like, the physician through diet and hygiene is expected to do the impossible. He is expected by proper lubrication and fueling to change the Ford into a Lincoln. Unfortunately much of the material issued in regard to infant feeding, vitamins and child hygiene by the medical profession has lent color to this viewpoint, and as a matter of fact it is difficult not to believe that some of my over-enthusiastic colleagues have a feeling such a thing is possible.

In examining the many textbooks on infant feeding or the numerous pamphlets on infant and child hygiene which have appeared in recent years, it is striking that almost without exception none of them discuss the kind and type of material upon which the pediatricist is called upon to work. The view is easily and almost subconsciously gained that all normal babies are born equal from a physical standpoint. Although the question may be open to discussion it is my opinion, based upon observation, that whether an infant thrives and develops satisfactorily is due as much if not more to the inherent constitution of the child than to the method of feeding. Some infants will develop satisfactorily upon the most bizarre types of food—provided quantitative needs are met—while others reared upon the most carefully adjusted dietary and in accord with the most modern methods known to child hygiene fail to make the physical progress of the average baby.

One of the most striking examples of the influence of inheritance upon growth, development, and body type in infancy is to

watch the progress of dichorial twins. It is a more common experience to see two infants of the same age and, seemingly, physically the same at birth, develop in quite different directions, despite the fact that they are fed in the same way and reared under similar hygienic and economic conditions. One will grow rapidly, gain steadily in weight, be calm and placid and never cause the slightest disturbance; while the other will fail to thrive and will be a constant source of difficulty to all concerned. The more experience with individual babies accumulates the more obvious it has become in my experience that the fundamental factor for their differences in development lies more in the constitution of the infant with which he is endowed, for better or worse, at birth, and less in his feeding and what we may term in a general way as his hygiene. Not that a splendid healthy baby cannot be ruined by improper feeding or hygiene, but we must recognize that the vast majority of American babies today are very well fed, and still marked differences occur in their growth and development.

This is by no means a new viewpoint—in fact it is extremely old, as are many of our so called discoveries of modern medicine. Unfortunately there has been a tendency to overlook many old truths in the urge of modern medicine to reduce the science and art of medicine to standards of chemical and physical precision. If you can spare the time to delve back into some of the older textbooks, particularly those of Continental origin, you will find considerable discussion of diatheses and constitution. But in most of the modern American texts, which our younger generation quite rightly take as guides, the subject is as silent as the voice from the grave. I do not intend to take up your time with an historical résumé of the various diatheses and constitutional types which have been described for infancy and childhood by different authors, but simply to discuss a few simple conclusions and observations which have helped me considerably in my own work and which have added zest and interest to the individualizing of the day to day problems of practice.

First let me discuss a matter which is a constant source of misunderstanding to nearly all of the laity and to many physicians. It is the confusion that exists between the words average and normal, when applied to the use of these terms in discus-

sion or relation to the growth and development, and to the constitution and type of body habitus of an individual infant or child. Our literature, both medical and popular, is filled with a multitude of tables of averages. These tables, if of any value at all, are made up from hundreds and thousands of measurements of one kind and another. You find average tables of every kind and description from the average time of eruption of the different teeth of the first dentition to the average time of beginning menstruation, while the tables of average physical measurements relating to growth and physical development are legion. These tables have nothing to do with what we may term normal, except that the figures are usually stated or assumed to be taken from "normal material." A perfectly normal child may show marked variations from the average or group figures—either below or above the line if the figures are reduced to a graph, both in time relationship and in physical measurements. This is so obvious that it seems trite to make the statement, but it is a matter which I find myself explaining and re-explaining again and again to anxious and troubled parents. There is an individual norm for every individual child and what may be normal for one may be quite abnormal for another. What determines as a rule the normal as related to growth and development of a given individual as well as the constitution and body type is a group of inherited factors. While we must recognize that severe or chronic nutritional disease or infectious processes in infancy may alter growth and development to a greater or less degree, the instances where this does take place are relatively few and insignificant when we consider the infant population as a whole. While the average time of eruption of the first teeth is the fifth month, many normal infants have teeth at four months and others as late as the seventh or later. While the average time of the first menstruation is 13 years and 9 months many normal girls menstruate during the eleventh or twelfth year and others as late as the fifteenth. On the other hand, a girl with her first menstruation at the average time may have quite abnormal menses. It is quite irritating to have normal healthy parents below average stature and size complain and worry because their perfectly proportioned normal and healthy baby of a year weighs only 17 pounds.

They are probably earnest, intelligent parents, who have been carefully recording the weight and have read in Dr. John Doe's book on "The Care of the Infant" that the average baby of a year weighs 21 pounds. At the same time health columns and lectures have filled them with that ghastly thing called malnutrition.

Perhaps you may properly say that it depends in large part upon the definition of "normal." That is quite correct, and normal, as applied to the physical characteristics of the human race is indefinable, for, as a matter of fact, it does not exist if we try to define a specific normal for the human race as a whole. On the other hand, if we consider norms for each individual we can make a definition which has something of truth and value in it. Probably as near as we can define a "normal child" when speaking of its physical condition, is to consider it so if it is free from recognizable pathological lesions which interfere in any way with its functional integrity or which interfere with its inherited pattern of growth and development. Certainly the word average, or that rather silly term "optimum" child has nothing to do with the definition of a normal child.

In my own experience I have come to classify normal infants into three groups which graduate one into another, based upon what may be termed "tonus" for want of a better short descriptive word. The mean or average group has an average tonus which can best be described by considering the hypo- and hyper-variations. In a general way the hypertonic group of normal infants shows the following characteristics. They are as a rule below the average weight figure of infants of the same age, and usually the average weight for length figures. They may, however, be shorter or longer than the average length figures. The skin is clear and fine and as a rule dark. The subcutaneous tissues are sparse. On the other hand the muscular development and strength is considerably above average and their activity is striking and noticeable. They hold up their heads and bodies, turn over, and walk at a relatively early age. Sleep as a rule is less than that of an average infant. Metabolism is seemingly active, for as a rule they require some 15 to 20 per cent more than average figures to make satisfactory progress. They have a tendency toward what might be

called "temperamental" and express emotional likes and dislikes in a distinct and decided way. If you turn from the infant to the parents you will find as a rule that one or both of them are of a slender build but active and muscular. The term "wiry" expresses fairly well the type of body habitus to which I refer. The hypotonic type is simply the antithetic type. The skin is apt to be coarse and the coloring fair. The subcutaneous tissues are thick and the muscular development poor, but there is weakness or flabbiness. The infants are calm and placid and slow in movement and response. They will gain, even remarkably at times, on a food low in caloric value, making satisfactory progress on a formula 10 to 20 per cent below average requirements. For age and length their measurements are above average as a rule. Usually one or both parents have a tendency toward adiposity. It has seemed to me that there is a tendency toward gastrointestinal upsets in the hypertonic type and toward respiratory infections and troubles in the hypotonic. The hypertonic usually have several stools a day and the hypotonic has a tendency toward intestinal sluggishness. Sometimes distinct examples of both types are seen in successive children or in dichorial twins in the same family, both resulting from the mating of individuals of different constitutional types of body habitus. Between these two is the average tonus group which may be above or below the average weight for age figures, but usually follows closely the average weight for length. I do not see how we can consider the hypotonic and hypertonic types as anything but normal. They follow out the inherited type of pattern, are healthy, and thrive satisfactorily. There are most certainly no pathological conditions present nor any evidence of endocrine disorders. It is my feeling that they are as normal as infants of average tonus. If we keep them free from infectious processes and provide them with the various necessary qualitative and quantitative nutritional elements we cannot change or alter the constitutional body type of these infants. While one may be under average weight, thin and muscular, and the other over average weight, fat and somewhat pasty when compared with the infant of average tonus, both are distinctly healthy and normal.

It may be asked why such a classification is of any value or use. To the pediatricist

whose work is confined to the hospital and the pathological it is of little or no practical value. To the pediatricist who in addition is engaged in private or public health work some such classification is of decided value. It enables one to foresee in advance certain probabilities of development in infancy and childhood. If the parents of a hypertonic baby, for example, can be told in early infancy that, while their baby is perfectly normal and healthy, he is of a body type that will fall below the table of averages as the infant grows older, the inevitable comparisons which the mother of a baby makes with every other baby of her friends and relatives does not become a source of worry, and give her either the sense of inferiority, or the insistence on changing food, etc., or doing something to make her baby measure up to some other. The result of some of the child hygiene movement has been to create a feeling or idea that there is a fixed standard of normalcy to which every baby can or should conform. This is of course absolutely erroneous.

Turning to the abnormal types of constitutional body types we find the greatest confusion exists. Too often in the past certain conditions which we now know to be acquired have been considered as constitutional types, as seemingly the "spasmophilic diathesis" for example. The "exudative diathesis" is largely if not exclusively a part of what I believe we should now designate as the "allergic diathesis." The evidence is quite convincing that hypersensitiveness is in large measure, if not exclusively, an inherited trait. One of the routine questions to be asked in obtaining the history of an infant is to inquire into the presence of hay fever, eczema, and asthma in either parent or their families. So many of the obscure pathological conditions occurring in children without evident asthma or eczema are being found to be allergic in origin that this constitutional diathesis is becoming more and more important as the general etiological factor has become known. The so-called lymphatic diathesis is in my opinion a rather vague and indefinite group. In my experience it has been a most unsatisfactory classification and unimportant.

Another constitutional type which has been passing out of fashion in recent years has been the "nervous" or "neurotic" diathesis. Perhaps it was well, as the term was used to cover a multitude of sins of omis-

sion and commission on the parts of parents and caretakers and was an easy term of refuge for the tired physician. The saying in one form or another that children are not born nervous but become nervous as the result of being born and reared in a tense, neurotic environment has been repeated so often in recent years by physicians and psychologists that it has acquired the dignity of a truism. But in the last few years considerable doubt has entered into my mind and I am coming to the viewpoint that a certain group of infants are born with a definitely unstable nervous system and will be nervous no matter what the environmental circumstances may be. You see young infants so excessively irritable, so emotional and so easily unbalanced that it seems impossible to believe that their nervousness is all an acquired reactive phenomenon. It is true of course that such infants are born in families where the environment is tense and one or both parents neurotic or "nervous." But if there is such a group of infants and children with an inherited constitutional nervous diathesis, it is in just such circumstances that we would find them. Such infants as they grow older are the type who so frequently usher in even mild infectious processes with a convulsive seizure and who develop habit spasms as a result of emotional conflicts. Perhaps it is wise to insist on the dictum of a nervous environment, as the acknowledgment to parents of an inherited nervous instability opens the door to all sorts of liberties and excuses on the part of the parents and the child, and tends to lead into fixed patterns tendencies that to a large extent can be brought under control.

As we pass from infancy into childhood the dominating importance of heredity in determining the type of body habitus of a given individual becomes even more striking, for at this time constitutional types become more differentiated. Many different classifications have been devised to group these differences in body type. Whether we use such a simple one as lateral and linear, or tall thin, average, short stout, or some one of the classifications with as many as seven divisions is of little practical importance. The fundamental fact is the recognition that different types exist and that the normal for a given individual depends entirely upon which type he falls into. This cannot be over-emphasized, as even more so

than in infancy tables of averages have been misinterpreted as tables of norms. Let us take two children of the same age, sex, and height. The one may be slender, wiry and muscular, the other stocky and with a tendency toward adiposity. The difference in the bony framework is striking. The chest measurement of one several inches less than the other. Both children are healthy and free from pathological lesions. The differences are due to inherited factors which govern their body type in the same way that the color of the hair and eyes and shape of the nose follow an hereditary pattern. To consider either one or both as abnormal because they do not fit into the "average" is most absurd. Yet again and again we find such children considered as abnormal because they are under weight or over weight when comparisons are made with tables of average weight for sex, age and height. In a so-called modern progressive school in my own home city where health is featured, the children are sent home each month stating that John or Mary, as the case may be, is one-half pound over weight or 2 pounds under weight and so on. Such a statement is entirely without meaning or importance. It would be laughable were it not for the fact that many parents take these reports seriously.

As physicians we have been constantly reiterating that malnutrition must be based on the physical examination of the total child and not on weight. In this examination I am certain that we have not given the type of body habitus and constitution of the parents sufficient consideration, as it is normal for a child to follow an inherited type of body habitus. In other words it is normal for certain children to be under or over average weight because they are simply following out the laws of inheritance.

There are a great many phases of body habitus which might be discussed but time and your patience forbid more than a mere mention. For example, the racial groups are most important, both as they affect body types and in regard to their constitutional tendency toward certain types of disease. Then, for example, the attributes of the different body types might be discussed: how the tall thin type is prone to easy fatigue in childhood and to postural defects. Knowing these things guides us in our preventive work so that functional impairment may be avoided.

Some of the abnormal deviations of body type are important. Thus the "pituitary type" with abnormal adiposity about the breasts, hips, and lower abdomen and under-developed genitalia. Between 4 and 5 per cent of the children in my material are definitely of this type to a greater or less degree. By early recognition and treatment a great deal can be done for this group and the excessive obesity of pubescence and adolescence avoided. There is a definite hereditary factor in this type of body habitus.

The relation of emotional and abnormal psychological reactions to different types of body habitus is another interesting phase. For example, excessive height in girls and the opposite condition in boys not infrequently leads to behavior problems. Relations such as this are most important to those who have to deal with the physical and mental health of children.

I hope I have been able to point out to some of you and recall to others the importance of body types in the growth and development of children. Necessarily my paper has been sketchy. But if it has emphasized sufficiently the importance of inherited factors and stressed the fact that all of our present knowledge of qualitative and quantitative nutritional factors is only material which enables us to keep the human machine of the child up to par, but is unable to alter the body type, its purpose has been served.

DISCUSSION

Chairman O'Donnell: I want to take this opportunity, on behalf of the Section, to thank Dr. Veeder for his very excellent presentation. This paper is now open for discussion or questions. I should like to ask Dr. Veeder one question. In the pituitary group that you recognized early, what type of treatment did you use? You also mentioned that they got rid of adiposity along toward puberty. I should like to know what treatment you used.

Dr. R. M. Kempton (Saginaw): It was my privilege about a year ago to view Dr. Veeder's baby clinic which he holds a couple of times a week in the slums of St. Louis. I want to say that if any of you are in St. Louis at any time and want to attend a good show for the afternoon, drop in and watch Dr. Veeder. It is one of the best entertainments I have ever been privileged to sit in on.

Dr. D. J. Levy (Detroit): I have no question, but it is a pleasure to hear a paper of this type after the other scientific papers that we have been listening to at this meeting. It is highly important for a pediatrician to have a grasp of the Mendelian law. It is more important for those who have to do with the examination of school children to keep in mind the theories that Dr. Veeder has presented this afternoon.

I am sure that one of the most distressing situations with which we are to deal in our daily practice is that of the very much disturbed parent who brings the child into the office because of the report

of the school doctor that the child is undernourished when, on examination, we find that the parent or the grandparent was at the same stage of development at the same age. I have one formula that I give to parents. I rather like to emphasize the difference between average and normal. I tell the parent that if the child has good contour to his flesh, translucency to his skin, luster to his hair, straightness of the thorax, reasonable resistance to infection, shows a fairly uniform tendency to growth and development, that child in all probability is a healthy child, conforming to its own individual norm, irrespective of its height and weight.

Dr. Borden S. Veeder (closing discussion): With regard to the one question that was asked as to the pituitary type, I think that is the one distinctive type that we find early or fairly early in childhood, of course, leaving out of consideration such questions as the baby who has thyroid insufficiency. The pituitary type of child is not particularly pathological. Mentally, they are fairly alert and do fairly well at school, are friendly with other children. One has very little difficulty with them, except that they grow, if you let them alone, to an enormous weight, and then create a problem. For instance, I recall two boys who, within the last three years before we got them into control, about the age of fifteen, had gone up to 240 and 260 pounds. They would puff in and out of the office. It was a terrible strain on the heart. Exercise was a difficult thing. You cannot let them play football with boys of their own age. The first thing that we usually notice about them in early childhood is the failure of the genitalia to develop at the normal rate, when taken by comparison in examining a large group of children. Sometimes there is, of course, a tendency to the split scrotum. With the girls, the fat usually begins to show deposition about the pelvis along about the fourth or fifth year. One finds then that they are putting on more of the adult mature female form, with the deposition of fat that comes around the pelvis at that time, than is normal. With the average children, boys and girls, there is very little difference in the figure until they reach puberty. With boys, it usually starts about the eighth or ninth year, when we notice the breast development quite large, and they put on fat particularly below the umbilicus and about the hips. If you leave them alone, they grow tall and fat and strong. Usually you find that either the mother or the father has that type of body habitus.

As for treatment, you cannot control any child on any one method of treatment for obesity. You have to combine exercises with dieting which, of course, cannot be too severe because they must eat a certain amount of food. We usually give these children hypodermic injections of anterior lobe. How much good that does, I do not know. It is a hard thing to say. At least, we have followed them right through with that, and occasionally we put them on short courses of thyroid with that, at the same time. If we can get the children along about eleven or twelve, or even earlier, we can keep them from putting on a tremendous amount of weight, holding down their weight.

One boy that we started in last April weighed 280 and he is down to 230. He has taken off fifty pounds without hurting himself, changing his figure, that is the fat quite largely came out of the pendulous breasts and pendulous lower part of the abdomen. Only a few of these cases go on to a marked pathological change, but there is a very distinct tendency toward the type in at least four or five per cent of the material that comes under observation in the office and the schools. That is the type to which I referred. I believe there is a distinct pituitary feature in all of those cases. When it becomes excessive, they take a jump of thirty or forty pounds unless you watch them closely.

TUBERCULOSIS TODAY AS COMPARED TO TWENTY-FIVE YEARS AGO*

WILLIAM R. VIS, B.S., M.D., F.A.C.P.†

GRAND RAPIDS, MICHIGAN

Calaban on Setobos sat on the rocks as he speared crayfish that were passing before him. This semi-human monster was killing and torturing for the joy of killing. Yet he did not spear each crab that filed by, only certain individuals as it pleased his fancy. Tuberculosis might be likened to Calaban as it snatches certain individuals out of the long file of humanity passing by. Not every one is chosen, only one out of every seven becomes the victim of tuberculosis. In 1904, just twenty-five years ago, in the United States there were thirteen million people destined to die of this disease. Each year, if ranged in single file, the victims would form a line thirteen miles in length. Can you visualize a line of men, women, and children, thirteen miles long marching on to certain doom?

That was in 1904. But in 1929 the line has shrunk to five miles. Out of every thirteen victims in 1904, eight are now deflected from the line on to a safe tangent and saved to a life of usefulness. What a wonderful record for only twenty-five years! How was this accomplished? Who were the workers of this miracle? It will never be fully known how it was done and to whom credit is due. We can get a glimpse of the situation from the life of Dr. Edward L. Trudeau. When Trudeau was in the College of Physicians and Surgeons in the seventies he was taught three fundamental things about tuberculosis. Three fundamentals are a fair foundation to work on in the study of a disease if they are basically sound. Those taught to Trudeau were unsound, namely:

1. Tuberculosis is incurable.
2. Tuberculosis is non-communicable.
3. Tuberculosis is hereditary.

Even cancer in our day is not painted as black as was tuberculosis then.

When Dr. Trudeau was told by Dr. Jane-way that he had pulmonary tuberculosis he believed that his malady was incurable. The treatment prescribed offered no hope. Rest in a hospital with windows tightly closed to avoid drafts had been tried unsuccessfully

on Dr. Trudeau's brother. He could not enter a sanatorium because there was none in the whole country.

Dr. Trudeau's illness must have seemed an unmitigated tragedy. He had barely entered upon the practice of medicine and had a wife and a child dependent on his earnings. Just when he was beginning the period of greatest usefulness, his plans and hopes were shattered. At least, so it must have seemed to Trudeau.

However, he did not submit to the treatment prescribed. When he became convinced that he was steadily losing, he determined to return to the Adirondacks for a last visit to his beloved hunting grounds. This rebellion on the part of Trudeau marks the first red-letter day in the history of tuberculosis in America. He accidentally discovered that fresh air was beneficial in the treatment of tuberculosis. This beginning gave birth to a new hope which was well justified in the years that followed. Trudeau was saved to live a useful life and devoted it to the care of others afflicted like himself.

Thus was born the sanatorium idea in America. What had appeared to be a tragedy was revealed as the first step in a wonderful progress such as seldom has been equalled.

Modelled after Trudeau's first sanatorium, by 1904 there had been built 115 fresh-air sanatoria with over 9,000 beds. Today we have 618 sanatoria and 75,000 beds. The story told by these splendid institutions has taught us that we need no longer fear the first of the three "fundamental" teachings. Today we know that tuberculosis is curable.

In 1882, Robert Koch published the results of his three-year study on the tubercle

*Read before the Medical Section of the Michigan State Medical Society, at the Annual Meeting, Jackson, Sept. 17-19, 1929.

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bacillus. This remarkable pronouncement went far toward overthrowing the second and third principles, namely, that tuberculosis was hereditary and non-communicable.

By 1904 it had become accepted in scientific circles that tuberculosis was caused by the tubercle bacillus. However, the public at large was not informed of Koch's theory nor willing to accept it. Many in the medical profession were not persuaded of its truth. It probably takes a generation for a truth to become generally accepted even among medical practitioners.

A few there were in 1904 who were facing the facts and planning to fight tuberculosis according to the latest scientific developments. A handful of physicians and an occasional layman. In 1904 the National Tuberculosis Association was organized. That year the entire paid staff consisted of one worker. Today there are fifty-one staff workers.

But even these pioneers were working along a tangent. They derived a simple hypothesis, namely, if tuberculosis is due to infection by the tubercle bacillus, the next generation can be rid of tuberculosis by isolating every advanced case. Their mistake was a logical one. We know now that infection and disease are not identical. Infection with the tubercle bacillus is more prevalent today than it was twenty-five years ago, but the mortality is less. Civilization has brought with it the spread of infection and to our happy surprise it has not proved an unmitigated evil.

The epidemiology of tuberculosis helps to solve this apparent paradox. The American Indian has a very poor resistance to tuberculosis and the death rate may be six or eight times greater than among whites in this country. The Indian has never been generally exposed and lacking infection he has not built up an immunity.

Among Caucasians the Jew has an unusually fine resistance probably because the Jewish race has encountered more hardships and more exposure to tuberculosis than the average. On the other hand, Ireland is isolated, relatively, and the Irish are less thoroughly immunized to tuberculosis.

Now, what would happen if, in our country, infection became more and more rare? Would we be likely to lose our immunity? This is no idle query. We can imagine, as tuberculosis morbidity continues to de-

crease, that infection will diminish after a time.

The assumption now is that immunity is in part at least inherited. (Today we are putting reverse English on the belief of the previous century. Tuberculous disease is not inherited but the protection against the disease is hereditary.) Can such an immunity be produced by artificial inoculation?

Koch's great dream of immunization by tuberculin has not been realized. Many other theories have been advanced and later abandoned. Friedmann's turtle bacillus had been found disappointing by Dr. Trudeau even before Friedmann exploited his cure in this country.

Calmette and Guérin have won recognition with their B-C-G. This attenuated tubercle bacillus is administered to human infants and animals during the first week after birth, i.e., before infection occurs. The method is being used extensively but has not won universal approval. Petroff warns of the danger of possibly inoculating active disease as he thinks it is possible for the attenuated culture to recover its virulence. It is too early as yet to determine the permanent results of the Calmette prophylaxis.

In recent years the theory of childhood infection with tuberculosis has gained support. It is supposed that infection occurs in childhood but may lie latent until adolescence or maturity. All of us have probably encountered exceptions to this rule. However, the theory is probably correct. Most children do become infected, especially in densely populated communities. School children show positive tuberculin tests in increasing percentages from the first grade upward. By the fourteenth year perhaps 70 per cent are positive in our larger cities.

The problem of today seems to be not so much the prevention of infection as the maintenance of general health and resistance to infection. So today we have the Modern Crusade movement in our schools, the summer playgrounds in our cities, the well ventilated and sunny school rooms, the emphasis on home hygiene, sun-baths, good food and correct eating habits, tooth hygiene, removal of focal infections and immunization against infectious disease.

Many of these are public health movements and lie largely beyond the realm of the medical profession. However, much remains for the practitioner to do.

The physician must serve in the important fields of diagnosis of tuberculous disease and its treatment. Much could be said of each of these in 1929. What have we learned of the diagnosis of tuberculosis in the past twenty-five years? It must be admitted that the practitioner has not progressed far in diagnosing this disease. Most diagnoses are made only after the disease has become advanced. A diagnosis of incipient tuberculosis is rarely made even in large clinics. The physical examination has become efficient only in the hands of the few. The X-ray examination is remarkably reliable in the best laboratories. Besides these two methods the sputum analysis often leads to erroneous conclusions, if negative, and false security.

Pottenger states that the most important point in diagnosis of tuberculosis is to know when to suspect it. What of the diagnosis of childhood tuberculosis? The present trend of opinion is toward regarding pulmonary tuberculosis as identical in children the same as in adults, with the same signs and diagnostic criteria. In children we have in addition the help of tuberculin tests. After twenty-five years the skin tests have come out vindicated as worthy of fuller usage.

The treatment of tuberculosis is still the bugbear of the general practitioner. Our sanatoria are exemplifying the best in treatment today. How inadequately we are following their example in private practice is too evident for question. It is perfectly possible to treat a tuberculous patient well

at home provided circumstances are favorable, but most practitioners are unwilling to spend the time and effort to carry out such a régime.

The great problem in the tuberculosis program of today is the care of the adolescent boy and girl. In spite of the reduction in mortality in other age periods that of the adolescent girl has rapidly increased in recent years. Secondary to this is the incidence among wage earners in early adult life. Here also there is little if any improvement. What can we do to safeguard the lives of these who are rapidly growing up or have just reached the age of greatest usefulness? I believe it is every doctor's responsibility to advise against the use of tobacco by the young. This is even more urgent in the case of girls than for boys. Whatever evils the male population has been subject to since the days of Walter Raleigh, it is more than unfair to encourage the women and girls to subject themselves to this same hazard. I believe it is also necessary to stress the evils of intoxicating liquor. It behooves us to set a good example in this respect and to warn all our patients against this evil. Something remains to be said about the merits of proper clothing. Clothing should be worn for comfort, and if the apparel is too warm for comfort it is probably injurious. On the other hand, if not enough clothing is worn to protect the body against cold it will have an adverse effect on health.

The task of our generation then would seem to be to adopt a rational attitude toward the principles of right living.

BLAMES MUSCLES FOR SPINAL CURVATURE

Lack of balance between the set of muscles on one side of the spine and those on the opposite side was described as the cause of spinal curvature by Dr. Eben J. Carey of Marquette University Medical School, Milwaukee, at the Charlottesville meeting of the American Association of Anatomists. This suggestion contradicts a prevalent theory of the cause of this rather common condition in which the spinal column curves somewhat to one side or the other, generally accompanied by round shoulders and hollow or sway back. The usual theory is that the curvature is due to the motionless dead load of the body's weight on the upright spinal column.

In most animals the spine is horizontal and does not bear the full weight of the body. Yet Dr. Carey was able to produce typical spinal curvature in such animals by weakening muscles on one side of the spine, while leaving those on the other side

unchanged. According to his theory, the weight of the body in human beings is supported directly by symmetrically balanced muscles on both sides of the spine, and indirectly by the spinal column itself.

When the muscles are weak or of poor tone, so that the muscle pull is unequal on the growing spine of a child, curvature results, Dr. Carey explained.

In preventing curvature, therefore, one must guard against such conditions as bad posture of the body, lack of sunlight, lack of a balanced diet, lack of moderate muscle exercise, lack of adequate rest in a horizontal position, lack of sufficient fresh air, and chronic foci of infection, all of which might produce muscle weakness or poor muscular tone.

When curvature has occurred, Dr. Carey recommended treatment which would restore the balance between the sets of muscles. This will bring the spine back into correct position, unless actual structural changes of the spine have already occurred, he said.—Science Service.

THE THERAPEUTIC VALUE OF COPPER IN ANEMIA

A PRELIMINARY REPORT

H. V. DWYER, M.D., F.A.C.P.†

DETROIT, MICHIGAN

We are attempting to establish the value of copper as a therapeutic agent in the treatment of anemia. The work is based on the experimental findings of the Wisconsin group (Hart, Steenbock, Elvehjem and Waddell¹) whose results indicate a value hitherto unsuspected. They produced a *nutritional* anemia in a strain of rats by the use of whole milk feedings, severe enough to cause death in six to eight weeks if not checked. Five pure compounds of inorganic iron were added to the diet of individual rats in a dosage of .5 mgm. daily without succeeding in materially affecting the anemia. They next added the residue of three foodstuffs and also prepared extracts of them and added the extracts to the diet. The substances were dried beef liver, yellow corn and lettuce. The ashed material and the extracts were efficacious in curing the anemia. They then tried adding liver extract to the basic diet, without result. However, upon the addition of iron plus the liver extract, the results were good. Their conclusions were obvious:

(1) Milk is a ration incapable of maintaining the hemoglobin and red blood cells of rats.

(2) Inorganic iron alone failed to correct the anemia produced.

(3) Inorganic iron plus iron-free alcoholic extracts of dried beef liver, yellow corn and lettuce and the ash of the same substances completely prevented or cured such an anemia. Consequently the ash and the ash extracts contain in addition to iron some other inorganic substance or substances vitally concerned in hemoglobin building.

In their subsequent studies they used .5 mgm. of iron and .25 mgm. of copper daily, which produced an immediate and sustained rise in the hemoglobin. This led to the determination of the presence or absence of copper in the foodstuffs formerly mentioned, their ash and extracts. Copper in appreciable amounts was found to be present in all of them, also in liver extract. It was found that 300 grams of fresh calf's liver contained about thirty mgm. of copper. Six vials of liver extract contained about four mgm.

As far as can be determined from the literature, hemoglobin does not contain cop-

per. According to McHague, Warburg and Krebs, it occurs in the blood in a concentration of .0034 mgm. per 100 c.c. Hart and his associates venture the hypothesis that it may act as a catalyzer for some of the reactions concerned in hemoglobin building, just as iron functions in the production of chlorophyll.

It is important to note that Whipple,² working with dogs having a severe anemia, produced by *frequent bleedings*, classified foodstuffs according to their efficacy in treating this type of anemia. The first group contains grains, breadstuffs, common vegetables, some fruit, all fish and dairy products. This group is the least favorable. The second group is middling favorable and includes leafy vegetables, skeletal muscle, spleen, pancreas and brain. At the upper part of this group he places many fruits, apricots and raisins. Group three is the most potent and contains liver, kidney and chicken gizzard. He likewise remarks that the inorganic ash of apricots, liver and kidneys are potent. He also established the principle of "conservation of hemoglobin," demonstrating that ninety per cent of it is preserved when set free in the blood or serous cavities.

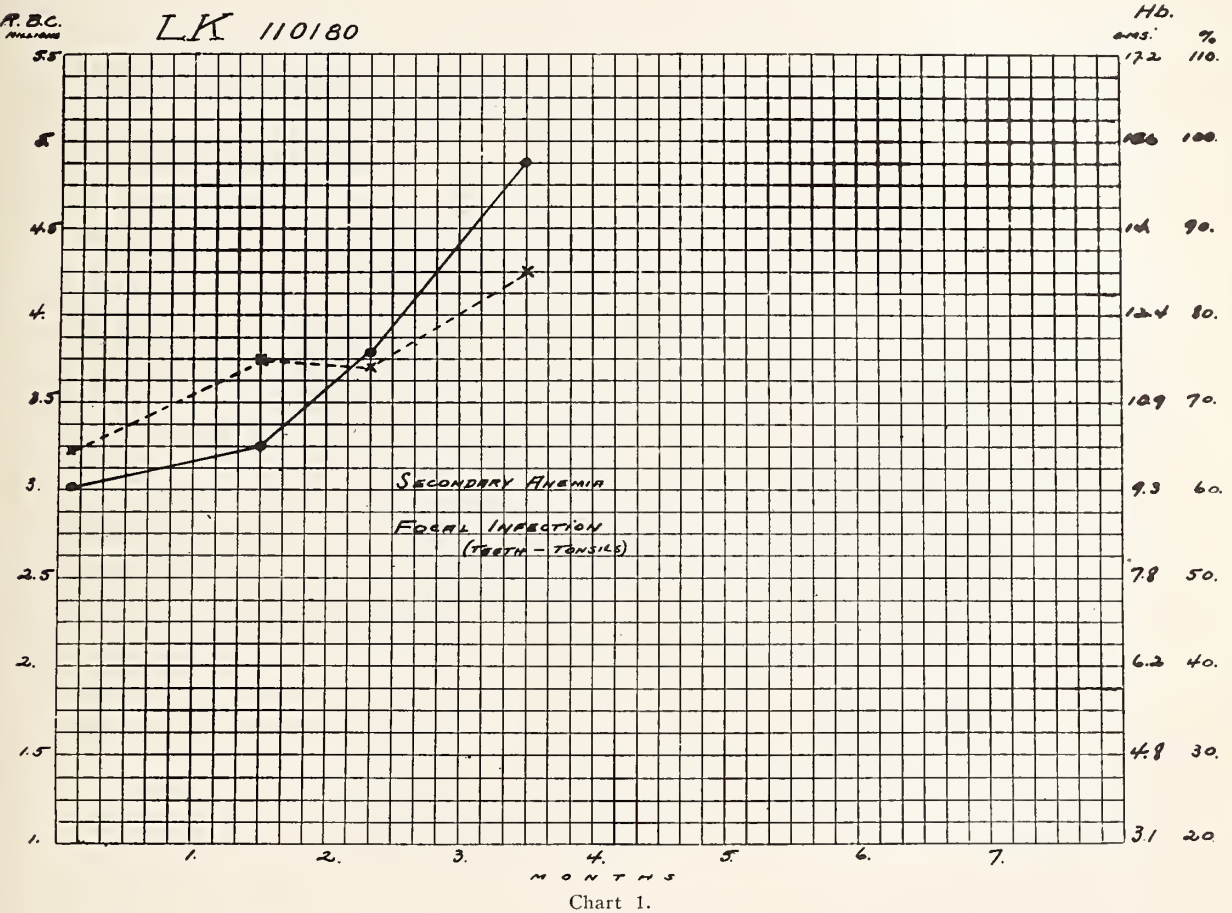
Middleton³ used copper and iron solution in two cases of pernicious anemia. The first did not show any increase of red cells but the hemoglobin was raised. The second showed no marked change for fifteen days, but then a remarkably sharp rise of reticulocytes occurred within a few hours after administration of liver extract. Several workers, including Sturgis, have reported negative results with the use of copper in the treatment of anemias.

The question of toxic effects of copper

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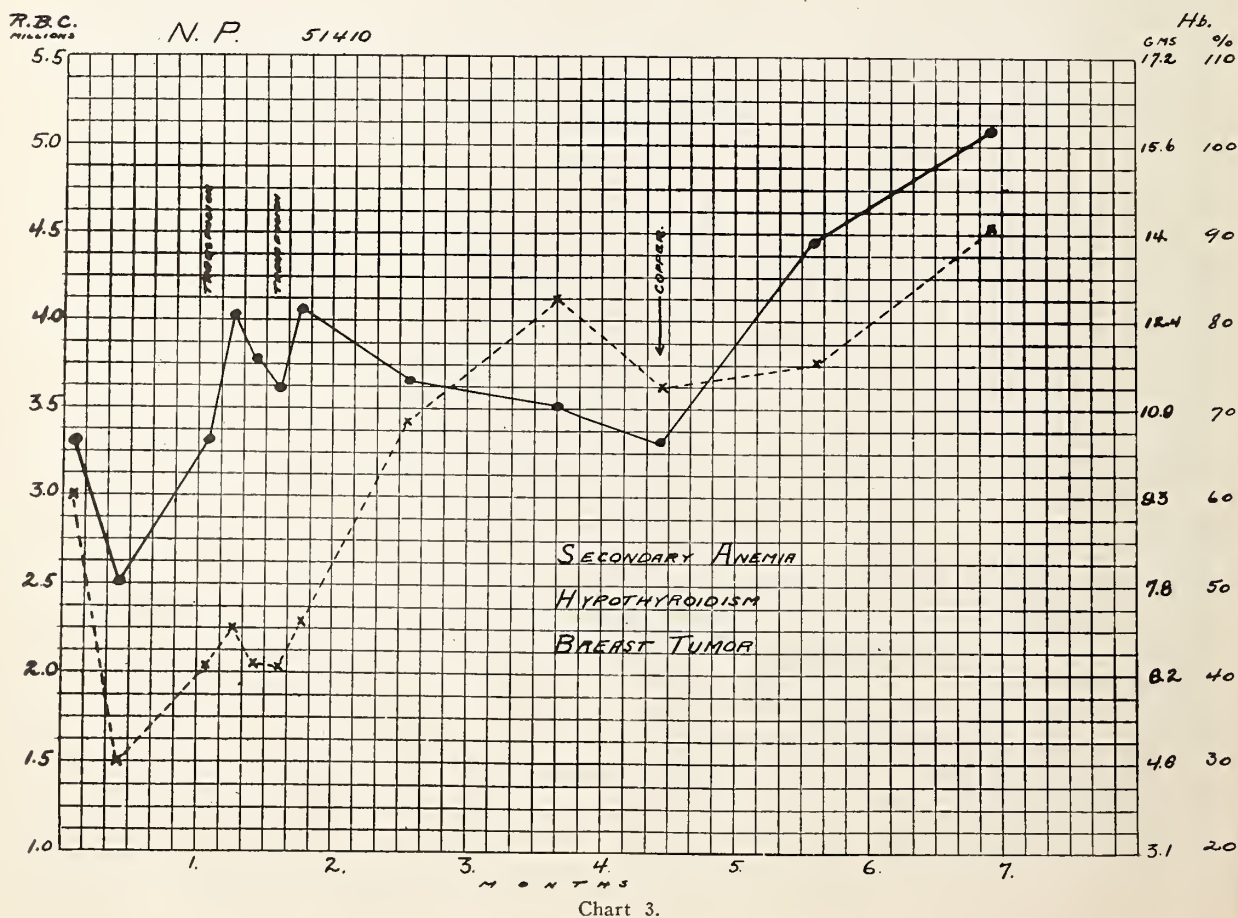
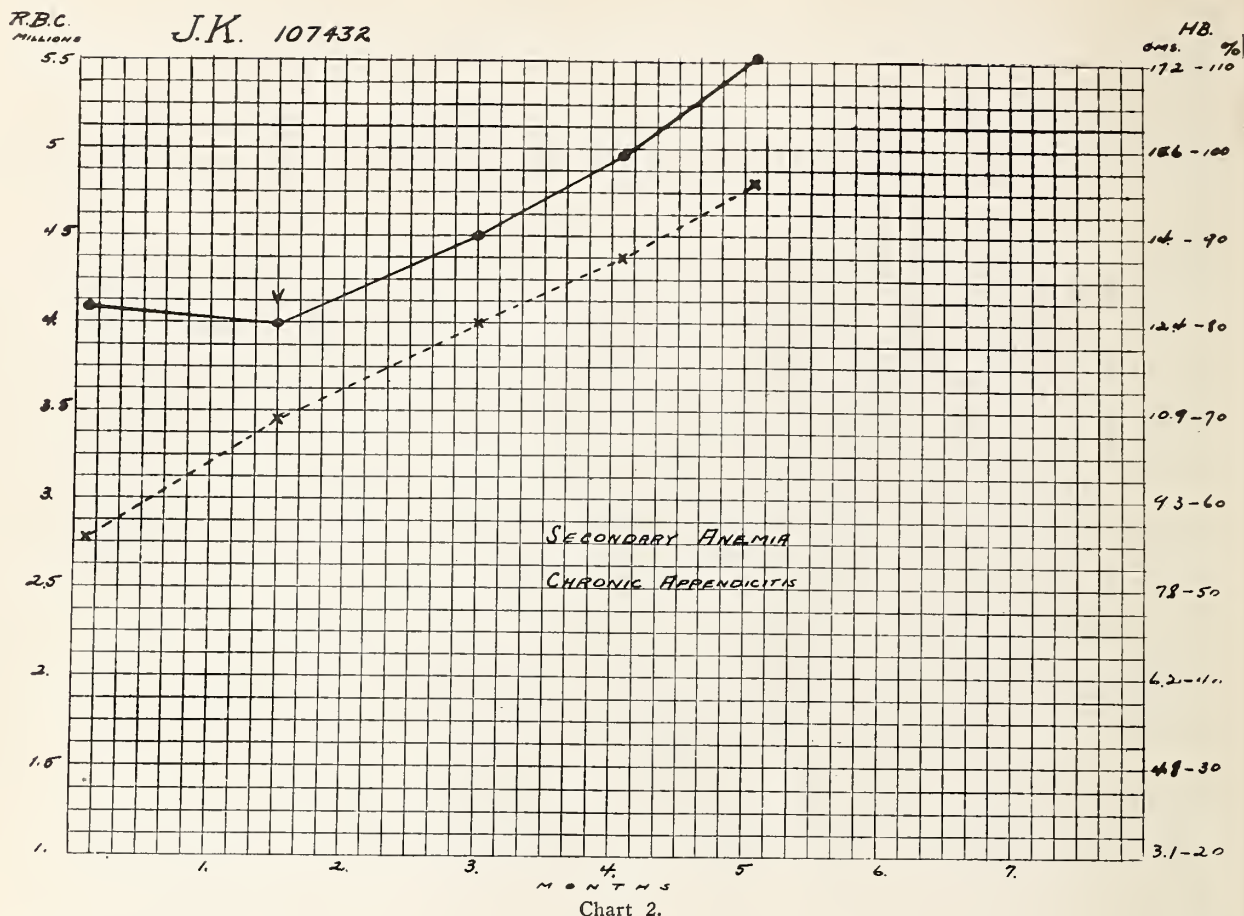
when ingested over long periods of time has been the subject of investigation for many years. Filhene⁴ in 1895, while testing the effects of cupratin, found that large doses given to dogs and cats produced vomiting but no pathological changes were discovered

particularly the deposits of hemofuchsin, later changed to hemosiderin, in the liver cells. He is of the opinion that copper exerts an hemolytic effect upon the red cells. He was unable to demonstrate any injurious effects to guinea pigs subjected to a similar



in the liver. The later experiments,⁵ using copper stearate, he found that pigment was deposited in the portal areas of rabbit's liver while the parenchymal cells contained fat globules. Metallic copper and copper tartrate did not produce any ill effects. Brandl,⁶ investigating the subject a little later, reached a similar conclusion. In 1918 Huber⁷ studied the effects of the copper salts of the amino acids. These compounds were given to guinea pigs by various methods. In the chronically poisoned animals the results were negative as far as the liver was concerned. Mallory⁸ claims to have produced hemachromatosis (bronzed diabetes), a rare disease characterized by cirrhosis of the liver, diabetes and pigmentation, by injecting copper salts into rabbits. These results occurred after a period of three to twelve months, according to the dosage. He noted

treatment. He attributes alcoholic cirrhosis in the human to the presence of copper in the alcohol ingested, having as its source the containers in which the alcohol is distilled. His statement that it usually takes from 15 to 25 years to produce hemachromatosis is followed by the one, "It seems perfectly evident that we can handle a certain amount of copper without danger, perhaps from 5 to 10 mgms. a day, possibly more." Sugihari⁹ found that the liver takes up copper more than any other organ, also that it takes up more from the portal than from the peripheral blood. It is rejected mainly by the kidneys. He established 3 mgm per kilo as a lethal dose in animals. Drummond,¹⁰ investigating the deleterious effects of vegetables artificially colored with copper, concluded, "It is questionable whether it has yet been proved that the absorption of small amounts of copper over long



periods of time is likely to lead to harmful consequences."

White¹¹ demonstrated the presence of copper in the tissues of man, cattle, sheep, fowl, rabbits and mice, also in cats, nuxvomica and bread. It has been described in

treated three days previously for eczema of the head by application of copper sulphate, prescribed by a quack.

The occurrence of chronic copper poisoning in man had not been established until Mallory demonstrated its connection with

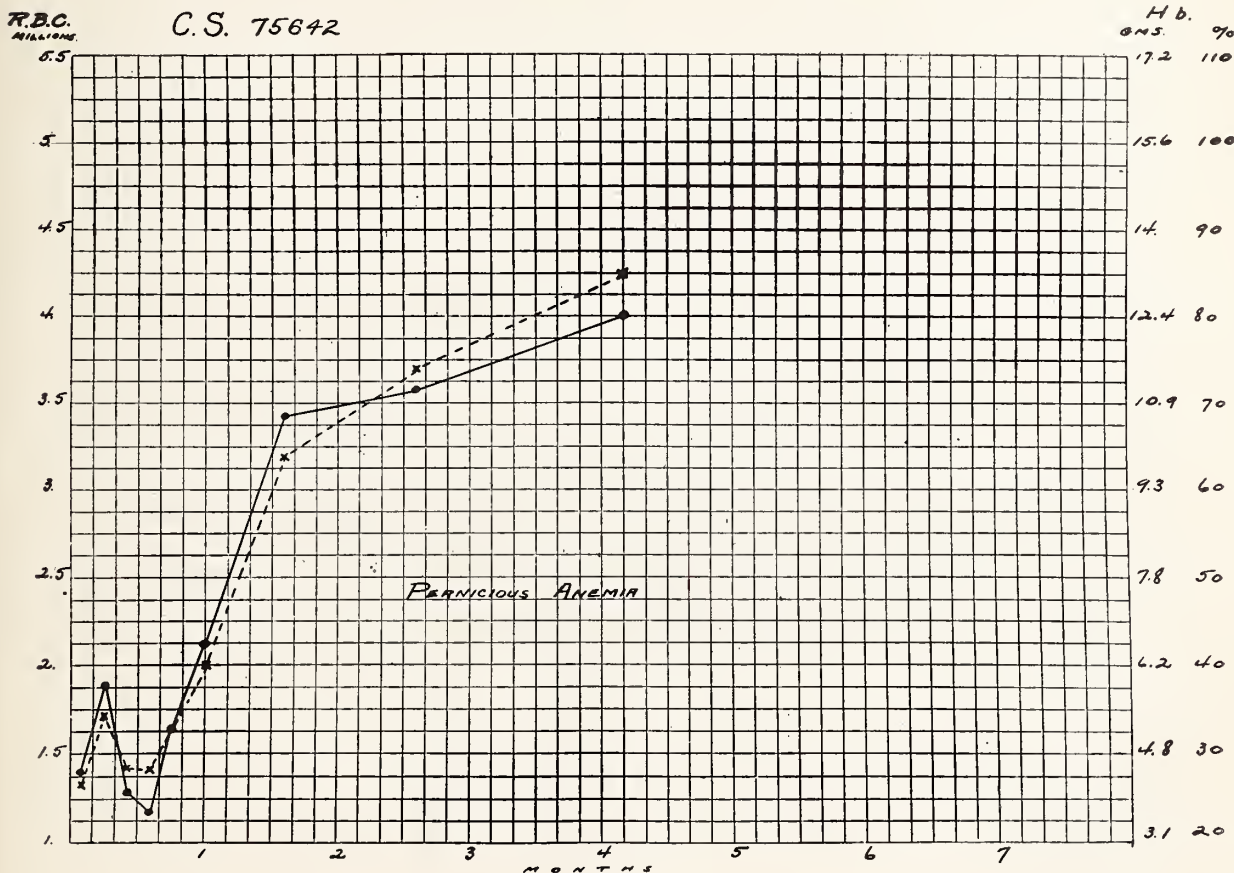


Chart 4.

fish, dogs, cats, horses and swine,¹² and in numerous plants and pharmaceutical preparations.¹³ As copper is present in wild animals and in animal and vegetable foodstuffs, its presence in man cannot be attributed entirely to the use of copper vessels, alcohol, etc.

Cushny¹⁴ states that copper seldom gives rise to poisoning. It is used internally as an emetic and externally as an astringent. The soluble salts precipitate protein from solution. When taken in large quantities they are irritating and corrosive and induce nausea, violent vomiting and purging. The usual symptoms of corrosive poisoning, collapse, weak pulse and respiration, headache, giddiness, delirium, paralysis, convulsions and coma may follow. They are usually fatal in a few hours to several days. Patheo¹⁵ records the death of a boy, two and one-half years old, from symptoms of hemorrhagic gastro-enteritis. He had been

hemachromatosis, a condition taking twenty to thirty years to develop. Recently Flynn and Vonglahn¹⁶ have cast a large shadow of doubt on the value of Mallory's work by the conclusions of their recent studies: (1) Copper or its compounds used does not cause a deposition of pigment in the livers of rabbits, guinea pigs or rats. Neither does it produce a cirrhosis in these animals. (2) Spontaneous deposition of pigment occurs frequently in the livers of normal rabbits on the usual laboratory diet. (3) The feeding of a diet of carrots exclusively will produce pigment deposition in the liver of rabbits, in every way identical with that ascribed to copper. (4) The pigment deposited in the livers of rabbits is probably of exogenous origin.

In copper and brass workers, gastrointestinal catarrh or colic and diarrhea occasionally occur and are ascribed to the copper swallowed in the course of their occupation.

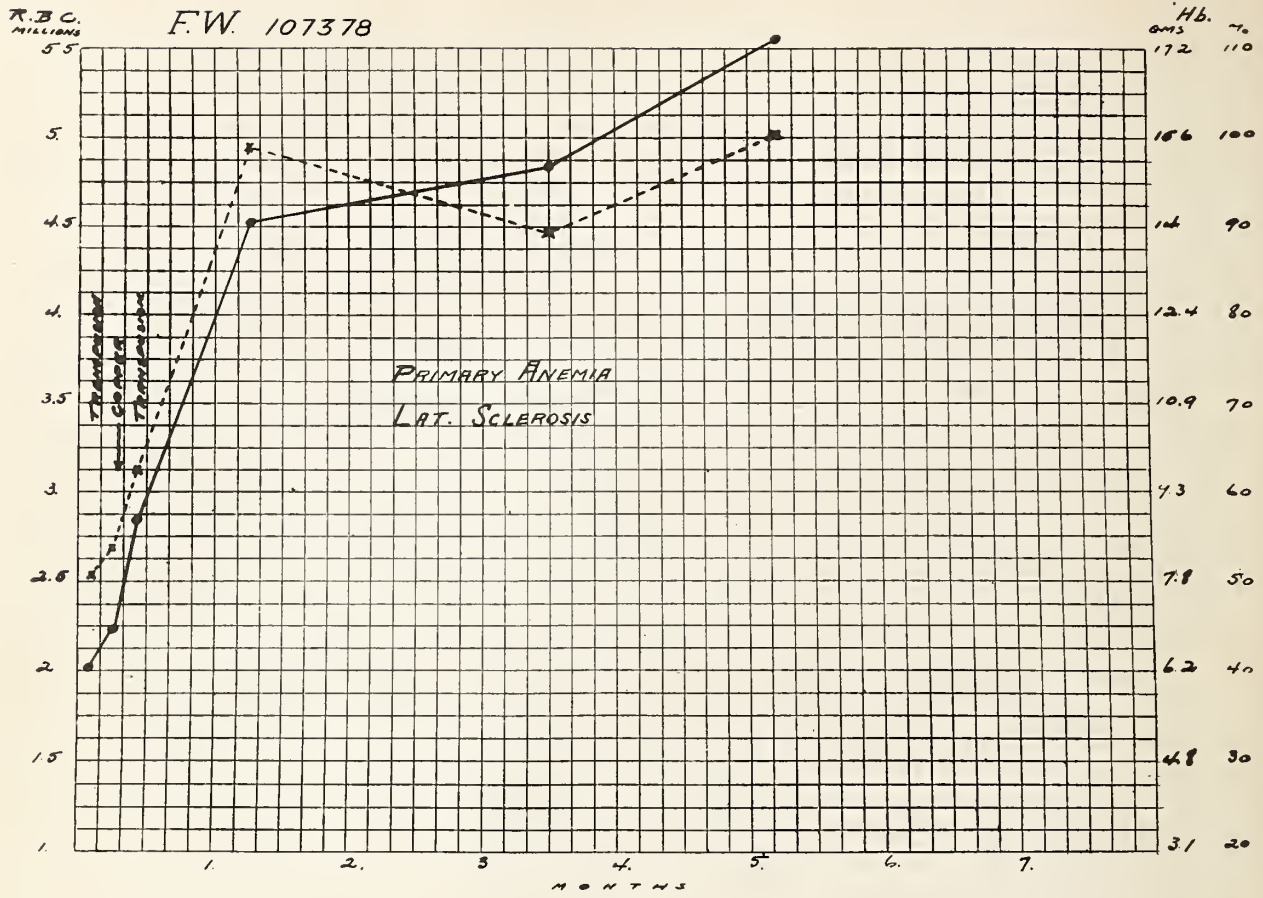


Chart 5.

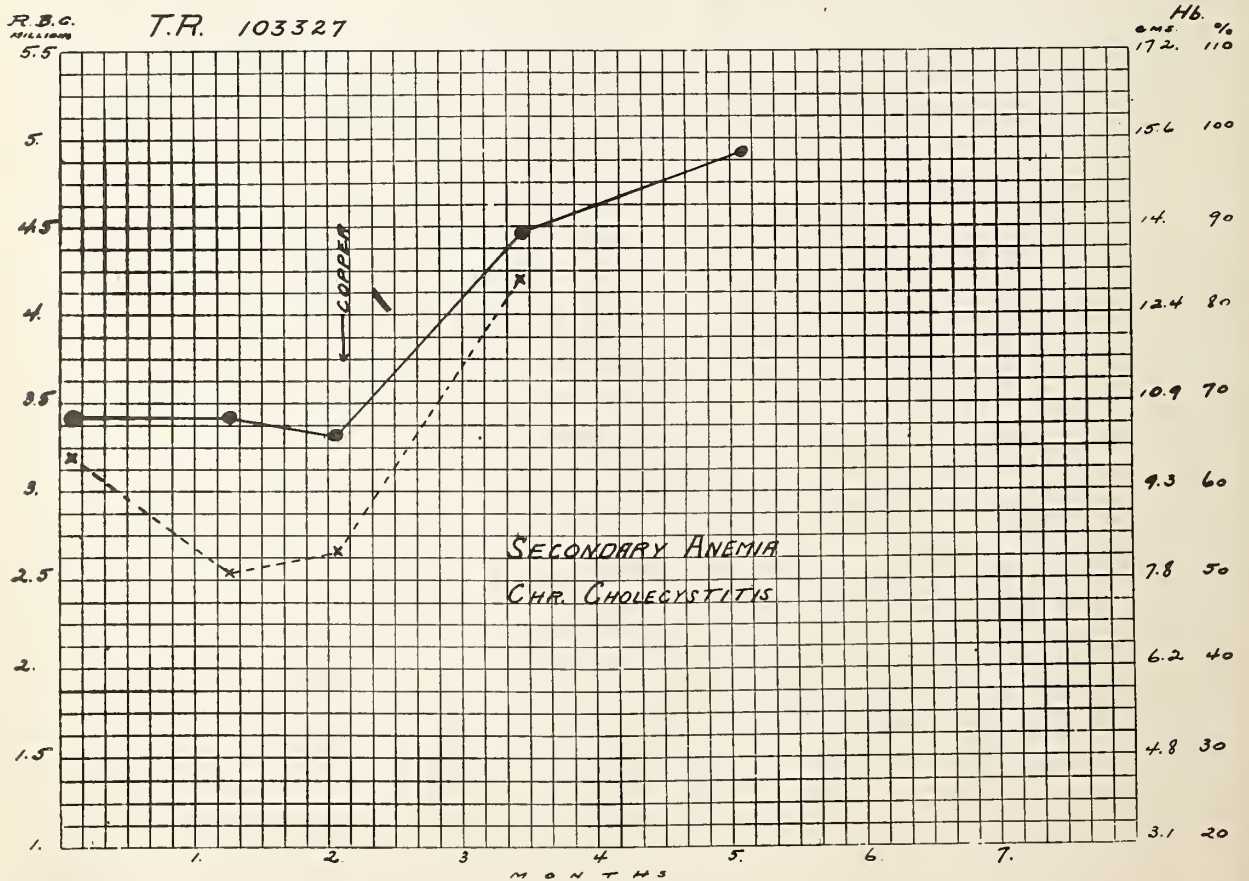
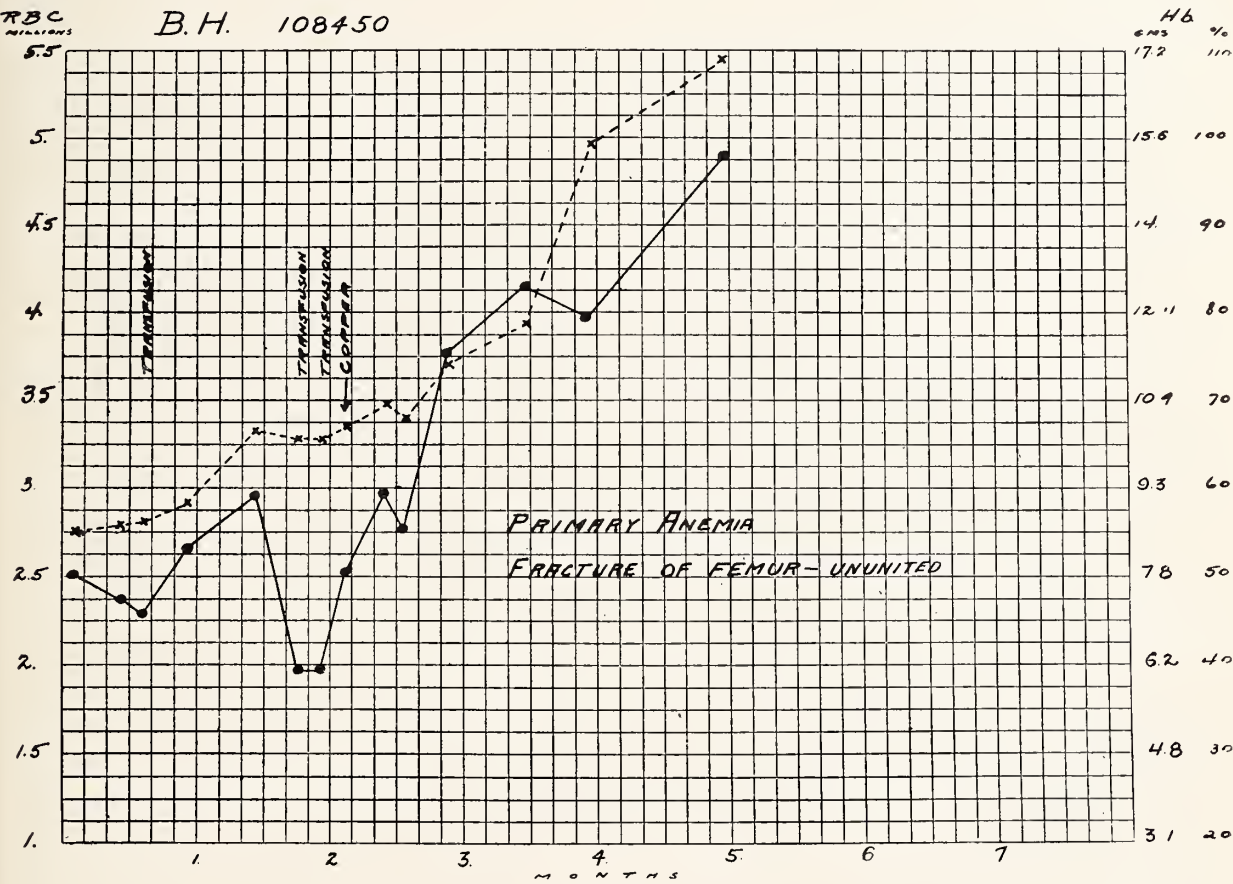


Chart 6.

The skin and hair have a greenish tinge and there is a green line on the teeth just where they enter the gums. This is known as the copper line and is ascribed to copper particles deposited locally and not excreted. Copper has been taken for prolonged peri-

sufficient. The charts of a few of the cases in this preliminary study are presented.

Chart 1 shows the beneficial effect in a case of secondary anemia associated with marked focal infection, which had failed to respond to iron or arsenic alone. The focal infection was not removed because of objections to surgical procedures.



ods of time without any symptoms except for slight nausea and intestinal catarrh. Animals have been fed for many months with food containing copper apparently without any symptoms of poisoning.

We have used copper and iron in solution, alone and in conjunction with other measures, in different types of clinical anemias. A solution is made up so that a daily dosage of 50 c.c. contains 4 mgm. of copper sulphate and 25 mgm. of iron citrate. The daily dosage is divided into three parts and taken with milk at meal time. Obviously these amounts are not as large in proportion to those used in animals by Hart. However, we feel that we have to proceed with caution owing to the possible detrimental effects of long continued ingestion of copper, even at the risk of our dosage proving in-

Chart 2 shows a moderate benefit in a case of secondary anemia associated with chronic appendicitis.

Chart 3 demonstrates the effect in a case of hypothyroidism, benign breast tumor and marked secondary anemia, after all other means of improving the anemia had failed. Copper and iron solution was not given until after four months of treatment with transfusions, iron preparations, diet and thyroid extract. Within a few months it entirely corrected the anemia.

Chart 4 is shown to demonstrate the average effect of the treatment of pernicious anemia with liver diet and liver extract.

Chart 5 shows the acceleration of the improved blood condition when copper and iron were used in addition to the liver therapy in a case of pernicious anemia and paralysis (subacute combined degeneration of the spinal cord).

Chart 6 shows the course in a case of secondary anemia associated with chronic cholecystitis and chronic tonsillitis, treated for two months by the usual methods without results. When copper was added to the treatment an immediate favorable response was noted.

Chart 7 shows a case of pernicious anemia associated with an ununited fracture of the neck of the left femur who was given several transfusions and whose diet contained one pound of liver daily for two months, all without any appreciable change in the blood picture. After addition of copper to the medication the hemoglobin and the red cells showed an immediate and sustained rise.

The range of diagnosis and the paucity of cases do not admit of any general conclusions. It does seem, however, that in selected instances, particularly those in which there is a nutritional factor, copper will prove to be a valuable adjunct in treatment. This is demonstrated in cases where other means of treatment have failed to produce beneficial results. We have not been able to demonstrate any detrimental effects due to long continued ingestion of copper in these doses.

SUMMARY

The question of copper as a therapeutic agent and its possible detrimental effects on the human organism is discussed. A small

series of cases in which copper has been used clinically in the various types of anemia is presented. It would seem that copper may prove to be of some value in the treatment of anemia in selected types of cases. A much larger series of cases will be necessary to corroborate this impression.

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MENTAL HYGIENE IN A COMMUNITY*

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There has been increasing interest and impetus given to the study of mental hygiene within the past few years especially. This increasing interest not only exists in agencies handling the problems of children, but also is found in the fields of law, industry and theology as well. It is significant that some of the legal profession and judiciary request psychiatric examinations not only for the problems of juvenile delinquency but also desire psychiatric examination of the adult offenders. Formerly, the crime itself was the major interest. The tendency at the present turns to the belief that the criminal should be the one to be studied. Indeed, many of the criminals charged with minor offences are often more serious problems and threats to the community than those incarcerated for perhaps severe crimes.

Psychiatry does not wish to coddle the criminal, but merely to study him intensively so as to acquire the best possible scientific and accurate opinion regarding his care and disposal. The legal profession in some of the eastern cities has shown an interest in studying the question of emotional problems of individuals who become

bankrupt. It is obvious what an economic saving can exist by the prevention of failures in business. Industry, likewise, has shown a tendency to study its employees from the psychologic and psychiatric points of view. Psychology, especially, has made an advance in meeting industrial difficulties, especially those for the determination of vocational fitness. Acquiring employees on the basis of proper adjustment to a satisfying position is a saving to the employer. The individual who is not suited to his work becomes discouraged and discontented so that he does not turn out work to the maximum of his ability. The medical profession has become interested, but possibly not as much as it might, in the advantages which mental hygiene has to offer. It is a well-known fact that sixty per cent of the cases seen by the cardiologist are

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psychogenic in origin and have no organic basis. Many of the gastro-intestinal disorders seen by the practitioner are on an emotional basis.

The medical profession has been somewhat lax in treating the emotional problems of the patient—a study which often requires painstaking time and effort. It is notoriously true how the pink pills of Dr. A. work better than the same pills given by Dr. B. Older family practitioners often are in a better position to render mental hygiene service because of their intimate knowledge of patients over a long period. The importance of studying the emotions in relation to physiologic activities is significant. Dr. Crile has made the statement that when the stock market goes down the blood sugars go up.

However, most of the progress in mental hygiene in the past ten years has been in the field of agencies caring for children. These include the study of the problems of delinquency, dependency, child welfare, child placement, etc.

What is the philosophy upon which the present tendency in mental hygiene has been based? The major premise upon which we operate rests on the belief that the study of the responses of children and the reactions of the child to his environment give the clues to and are the predecessors toward the development of his personality and later adult reactions. According to Dr. William A. White, "It is because the child is plastic, capable within limitations of being moulded by circumstances, that childhood is the most important period of life and the golden period for mental hygiene." It is during the ages of two, or before, to six that habit patterns and attitudes toward the environment represent the soil in which the later emotional reactions are sowed. Because children are most suggestible, and by the utilization of their desire for approbation, adjustments can be brought about.

Realizing, then, that the approach of mental hygiene is through a study of the problems of children, what divergent approaches can be used synchronously to arrive at a complete understanding of the child and his expressions of conduct? We feel that the integration of four fields, namely, the sociologic, the psychologic, the physical and the psychiatric, can offer most in arriving at these conclusions. It is on the basis of the

overlapping of these four fields that the philosophy of child guidance rests.

What can be gained from a complete sociologic study of the child, and how shall the community bring about this work? There are sociologists who believe that their approach can explain most of the problems of conduct. It is true that many problems can be explained from this point of view. However, many problems in individuals exist in spite of optimum environmental conditions. We divide the environment into two main divisions: those containing what we regard as the gross environmental or sociologic defects, and the other group containing the minor environmental pathologic factors. Among the gross sociologic problems we have the questions of children being educated in crime and abnormal behavior. Exposure of children to gross neglect and extreme poverty and such factors as alcoholism, mental deficiency, neurotic members of the family, broken homes, illegitimacy, etc., are examples. Among the lesser pathologic evils of the environment we have the question of the lack of recreation; intermarriage of different racial groups; excessive and over-indulgence by fond parents; frequent changes in habitat, etc. These multiple factors often re-act in the production of emotional difficulties in children, therefore it is the duty of individuals dealing with these community and family problems to prevent their existence, if possible. Therefore, mental hygiene in a community consists first in the prevention of disturbing the economic security and emotional tranquillity of the child by minimizing these traumata of the environment. An infant is dependent on his parents for protection and a secure home life. Many of our problems exist in homes where the security of the child has been disturbed by one of the factors mentioned, such as separation of parents by divorce, desertion, etc.

A second contribution and point of view which is necessary in the study of the problems of children rests in the field of psychology. Again, there are psychologists who believe that mental deficiency or special psychologic incapacities explain most of the problems. Mental deficiency should be ruled out in studying problems of children. Not more than twenty per cent of emotional disorders, however, can be explained on this basis. In fact, there has been increased attention to the study of the precocious

child. A study of special capabilities, educational achievements, handedness, speech-training, etc., are necessary to rule out any difficulty on the psychologic basis.

The third approach in the mental hygiene program should be in a complete study from the physical, laboratory and endocrine standpoints, if special studies are indicated in the latter group. Unfortunately, again, there are physicians who believe they can explain most of the disorders of children on the basis of faulty endocrine balance; focal infection and enlarged adenoids; deficiency in blood calcium, etc. A complete study from the physical standpoint is necessary to rule out all somatic factors.

Finally, the psychiatric approach is necessary to understand the child in his entirety. A psychiatric examination would be valueless without the three examinations previously described. A psychiatric examination is essential to determine the fears, states of tension, attitudes, etc., of the child. Shortness of time prevents anything more than a discussion of the most significant factors in the psychiatric approach.

Therefore, after pointing out that the major approach rests on an integration of the study of these four fields, what resources in a community can be called upon and be organized in handling the situation? We can describe two main types of community organizations which can be utilized. The first group may be classified as the unorganized type in distinction to the organized one in which an actual set-up of social worker, psychologist, clinician and psychiatrist are combined. Among the unorganized group we should think first of the one dealing with parent education. This, in its wider aspects involves the understanding of the individual of his own problems first. Child guidance, then, necessarily means parent guidance, accomplished by child study groups, contributing of pamphlets dealing with mental hygiene, and discussion groups led by people acquainted with this approach. However, this approach is fraught with danger, as often the parent is the source of the difficulty. By emphasizing the study of his child, his own problems are neglected. Child caring agencies and the family case worker often can do much in bringing about a satisfactory family relationship. Security in the home, opportunities for development, a chance to have companionship of his own age, good health, absence of congenital and

organic defects, recognition of his part in the family group, are the important factors in the acquirement of a soundly integrated personality. After the satisfying state of infancy has been passed, the child then turns to others in the environment, and gradually the child becomes emancipated from his parents. This process of growing up should be encouraged by the parents. The child should learn to do things for himself. He should receive the proper amount of affection from his parents. For example, if deprived of affection, the child may turn into himself to make up this deprivation, thus resulting in introversion. Those parents who have been disconcerted about the health of their offspring, due, possibly, to the fact that the child may have been critically ill, often develop hypochondriacal children by over-emphasis on simple bodily complaints. A child does not want to give up his dependency, and many of our infantile adults who cannot assume responsibility find the basis for their difficulty by carrying their dependent role on from childhood. Therefore, it is a problem of mental hygiene to aid children in growing up emotionally. This can be brought about in a situation whereby a child may have an opportunity of coming in contact with others of his age, and allow him to enjoy the normal inherent curiosity which he possesses, to experiment with his environment. Often nursery schools are of value in bringing this about. The emphasis should likewise be upon habit training in this younger group by mothers and nurses handling children directly.

However, it is when the child enters school that a good number of the problems and difficulties arise. In the first place, the child is now on a competitive basis, and instead of playing an important role in the spotlight, as he might have in his home, he now is relegated to perhaps a more inferior role. He may desire to gain attention by being the bad boy. His temper tantrums may represent retaliative measures to the orders of the teacher to show his thwarting in an explosive outburst. In addition, the child may have special reading or speech disabilities. Through the work of Dr. Orton, there has been increased interest in the question of handedness. The speech center in right-handed individuals is in the left half of the brain, and vice versa for left-handed people. Forcing the child to use the opposite hand to which he is fitted produces

severe emotional conflicts which may result in sensitiveness, feeling of inferiority because of school failures, truancy, etc. Therefore, the school offers, probably, the most important approach to the problem of mental hygiene. Teachers should be trained in the early recognition and detection of these problems. It is important, likewise, that the Visiting Teachers Association should be told of these problems so that the child can be referred to a child guidance clinic, or agencies established to handle the problems of children. Courses in mental hygiene should be established in the normal schools, not so much in terms of treatment but so that the teacher can learn about these conditions in their incipiency. With a State Hospital in the community, a pooling of interests, perhaps, might be brought about, so that the courses in the early diagnosis of emotional problems can be given by some of the staff of the hospital to normal school students, social workers, nurses, teachers, etc. In addition, the school psychologist, as well as taking the intelligence quotients of the children, should treat the problems of special psychologic disabilities. In addition to the study of children from the physical standpoint, the pediatrician should be trained in handling the emotional problems brought to him. The future of mental hygiene rests, to a great extent, in the incorporation of the child guidance clinic in conjunction with the public school system. Such a clinic could be the center where other agencies could consult and bring their problem cases. In addition, the psychiatrist, in the school system, where the community is not too large, could likewise do the psychiatric studies, in the cases of juvenile delinquency. Where the case load is too large, often a short consultation service can be utilized whereby visiting agencies can get an expression of opinion and a treatment plan which they, themselves, will carry out. Bad temper, day-dreaming, excessive fantasy life, undue timidity and shyness, marked fear or anxiety, restlessness, food fads, lying, stealing and sex vagaries, are among the problems which could be referred to the clinic.

The mental hygiene clinic should have, as another one of its major interests, the study of emotional problems and difficulties of adults which are not severe enough to produce hospitalization. We have seen that there are problems peculiar to age groups

and physiologic epochs in the field of mental hygiene as in internal medicine. Problems of infancy and childhood involving negativism, temper tantrums, enuresis, etc., characterize the earlier difficulties. The next epoch involves the problems which arise when the child enters school—the school group. Following this period, we have the problems attendant upon adolescence, and which can be handled in the school system. The awakening sex impulse often produces difficulties, not in itself, but because of the faulty parental discipline, and lack of understanding. Parent education and sympathetic understanding, social service supervision with proper recreational facilities can avoid a great number of these problems. The mental hygiene clinic itself handling the problems of adults could be used as the training opportunity for physicians who would refer their psycho-neurotic cases. Incorporated in the mental hygiene program for adults is the question of mental hygiene in the colleges. Often difficulties arise as a result of the student leaving home for the first time, and getting into a new setting after breaking his home ties. A mental hygiene clinic of this type could study the problems of the students in the local normal schools and universities. Of increasing importance is the question of mental hygiene in the college student body. Its aims are conservation of the student body so that the intellectually capable student may not be unnecessarily forced to withdraw. The clinic may forestall failures in cases of nervous and mental diseases which are immediate or remote. The clinic could by minimizing failures reduce feelings of inadequacy and unhappiness.

"The approach of the mental hygiene clinic could make possible the complete use of the intellectual capacity a student employs by widening the sphere of conscious control."

The adult mental hygiene clinic could study the psychoses in their incipiency. It is only in talking out the problem and finding the motivating conflicting forces which often have crystallized early in the pre-psychotic state that any satisfactory treatment can be done in many of the constitutional psychoses with psychotherapeutic measures.

In this brief time, we have attempted to mention the scope of the field of mental hygiene which attempts to bring the individ-

ual to a degree of maturity so that he can take on the responsibilities of life; without regressive tendencies, so that he is able to face reality squarely; without using any physical symptoms or nervous breakdowns as subterfuges to excuse failures. The philosophy of mental hygiene is based on the theory that a study of the problems of children offers the best means of prevention of these difficulties. The study of mental hygiene involves the combining and overlapping of the four fields: social investigation and approach of psychology; physical examination and psychiatry. Not one of these four approaches is self-sufficient and can explain all the problems. The community can meet the issue by any combination of these four forces. Since a large number of the problems are brought to light for the first time, in the school, a child guidance clinic in conjunction with the school system offers

many possibilities. Training of the school teachers and visiting teachers by psychiatrists in conjunction with the State Hospital seems feasible. It will be necessary, however, to have trained psychiatric social workers who can also aid in follow-up work on cases discharged from the State Hospital. The emphasis can be laid, however, upon the mental hygiene clinic itself handling all the problems and which can be used as a consultation service for social agencies who will bring cases. It could be used, also, by the juvenile court, and manage the problem of mental hygiene in the school. We feel, however, that a complete unit set up for a child guidance clinic offers the most opportunities both from the standpoint of organization, efficacy of educational service to social agencies referring cases and to the parent organization in the community.

OBSERVATIONS ON A SUMMER CAMP FOR DIABETIC CHILDREN

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and

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With the help of several friends, and the Detroit Community Fund, the Grace Hospital Diabetic Clinic has been able to give its children for the past four years, a two weeks vacation in the country each August. From a very small beginning, it has grown each year until in 1929 thirty-one individuals were cared for. Children from other Community Fund Clinics, and those under the care of any physician, who was a member of the Wayne County Medical Society, were invited; the total group including 14 boys and 17 girls, between the ages of 4 and 18 years. Some of these children had never been away from home and parents over night before in their lives.

The camp was located on Carol Lake, near Commerce, Michigan; where Mrs. Kessler, 600 Neff Road, Detroit, owns a summer cottage, which she has been kind enough to turn over to the Diabetic Clinic for this purpose each year. In addition, tents and cots were provided to care for the overflow which could not be accommodated within the cottage. The food was prepared and cooked by two cooks who were diabetic patients. They often labored far into the night in order to provide the children with some tasty surprise on the next day. The

children were placed under the direct care of a trained nurse, who had been trained in the duties of the camp, and was well versed in the treatment of acidosis, hypoglycemia, and the special complications of diabetes. In addition, a play supervisor for the boys and one for the girls were provided. The entire direction was undertaken by Miss Colwell, dietitian at the Grace Hospital Diabetic Clinic, who acted as supervisor, nurse and stewardess. A physician visited the camp every other day to make necessary changes in treatment, diet or insulin dosage, and to take blood sugars when required.

A plan for the daily routine of the camp had been previously drawn up. The children were to be fed at certain intervals; supervised exercise and games were provided

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for; the children were assigned to various duties under the direction of an officer of the day; and the Red Cross furnished camp fires, talks, music, and entertainment. Each day had its allotted activity, which was adhered to as far as possible. Children were not permitted to eat between meals, and if they felt hungry or weak, they were instructed to report to the nurse or supervisor immediately in order to prevent hypoglycemic reactions. They were to be taken away from camp in groups after meals for exercise and recreation; a rest period was provided; and a morning and afternoon swim. Urinalyses were arranged for twice daily, and twenty-four hour specimens were to be examined on those patients requiring it.

According to arrangement, the children met at the Grace Hospital, where buses and automobiles were awaiting, and after farewells to fond parents they started for the camp. We soon found that homesickness was to be one of the greatest difficulties, as many of these youngsters had never been away from home before, but once away and established in a routine, there was no difficulty. Visits from parents were very disrupting, often disturbing the routine of the camp for 24 hours. One boy remained only one night; two other boys had to be taken home after four days, although they had been quite contented until seeing their parents again. Consequently we feel that in the future camps, parents will be advised to remain away. Post cards and letters were not as disquieting and will be used in place of personal visits.

Miss Wright, the nurse, had an immense task. She inspected each child daily for cleanliness, bruises or injuries; gave the insulin; recorded the temperature and pulse; and supervised the examinations of the urine. Children who were not sugar-free or who were having hypoglycemic reactions were kept close to her for twenty-four hours. One boy was in acidosis when he reached the camp, but due to the nurse's capable management was in good condition the next morning. Several of the children had not been following the diets prescribed by their physicians, and when these diets were given to them accurately, trouble ensued, usually in the form of insulin reactions. Two of the patients had just recovered from coma, and were very weak and emaciated. They required additional care.

It is a tribute to the nurse that every child became sugar-free at the camp; many had reductions in their insulin dosage, and others were able to take larger diets.

No acute illness occurred except two cases of enteritis, which were easily controlled, and for which the patients had been previously treated at home. There were no accidents. One week was quite cold, but no coryza or rhinitis was observed. It seemed that the increased amount of exercise in the fresh air markedly increased the carbohydrate tolerance. Some influence must also be attributed to the accurate weighing of food, and the fact that there was no eating between meals. Taking the children away from camp between meals removed this temptation. It was gratifying to see these children eat. Every morsel was eaten in very short order, and many foods were served which some of the children had not eaten before. Melons were especially enjoyed, and diabetic ice cream was called for daily. Many children had been on monotonous diets and were pleasantly surprised with the foods they had not tasted before. For a short period each day the older ones were given instruction by Miss Colwell in dietetics, that they might be able to better substitute foods when they returned home. The interest manifested in these talks was very amusing, especially when some child learned that he could have a certain amount of bread and milk in place of another food which had become monotonous.

The service of a well trained dietitian is very essential to a diabetic camp. The monotony of a diet is not necessary if patients are taught food values and substitution. Miss Colwell had visited these children in their homes; knew their parents; and was well acquainted with their likes and dislikes, their faults and failings; as well as their habits and former behavior. It is to her that we largely owe our success.

In conclusion, our impressions of this camp may be summarized in the following manner:

1. A diabetic camp for children is very desirous and beneficial. Thirteen of the thirty-one children were able to have their diets increased, and four of them had their insulin doses reduced ten units. 5,781 units of insulin were given.
2. Many of these children would have had no vacation except for this camp.
3. Since it is impossible for parents to

take their children away while on diabetic régime, the camp also gives the mother a much needed rest, with the assurance that her child will have even better care than she will be able to give it at home.

4. The child is enabled to associate with other children without the pity which is usually bestowed, and the educational value of the camp is great.

5. Diets and insulin dosage must be varied according to the amount of work done, and no permanent diet can be strictly adhered to, but must be varied from day to day.

6. The expense of such a camp is not prohibitive. It amounts to about \$20.00 per week per child. A physician and trained nurse should be in constant attendance. The expense for two weeks would be:

Rent	\$ 50.00
2 cooks at \$20.00 per week.....	80.00
2 helpers at \$15.00 per week.....	60.00
2 nurses at \$50.00 per week.....	200.00
2 recreation workers at \$25.00 per week	100.00
1 dietitian at \$50.00 per week.....	100.00
1 physician	100.00
Food, supplies, etc.....	510.00
	<hr/>
	\$1200.00

7. Every large community should have a camp of this character, as it supplies a need to a special class of very unfortunate children.

8. If the expense for help could be eliminated by having these services donated, either wholly or in part, the expense of such a camp could be materially reduced, and the camp continued for a longer period.

9. The same help could take care of a much larger camp provided some of the work is done by its members.

10. Preparations are under way for a much larger and longer camp for 1930.

11. The duration of the camp might be extended to 2 months, during July and August.

12. The training received at camp teaches the children to occupy their minds with other matters besides food, and strengthens their will power.

13. Children who were docile and quiet became alert and active. They frolicked and played as they had never done formerly.

14. The association with other children seemed to develop their mental faculties; it taught them to do things other children were doing.

15. The cost is not prohibitive.
1401 David Whitney Bldg.

THEORIES OF HEARING UPSET BY ANATOMICAL DISCOVERY

The present theories of hearing have been upset by an anatomical discovery reported at the meeting of the American Association of Anatomists by Dr. Stacy R. Guild of the Otological Research Laboratory, Johns Hopkins University. In this Baltimore laboratory earnest investigations are being made in the hope of learning more about the causes of deafness and, subsequently, methods of preventing or relieving this affliction.

A rare type of structural defect of the inner ear was found in one ear of a man who, four weeks before his death, had perfectly normal hearing with even slightly better than average hearing for low notes, Dr. Guild reported.

The condition found was a large opening in the bony partition between two turns of the spiral tube of the inner ear. According to some of the best known current theories, sound waves pass up one side of this tube and down the other on their way to stimulate the nerve of hearing. If those theories are correct, the large opening found in this tube should have interfered with the wave systems in such a way as to have seriously interfered with hearing, Dr. Guild pointed out. The theoretical effect of such an abnormal opening may be compared to the effect in theaters or auditoriums where, due to echoes, there are "silent spots" or "confusion spots."—Science Service.

CARSICKNESS DUE TO JOLTING OF INNER EAR

Carsickness, a kind of seasickness which some people suffer from riding on street cars, does not result from the rider's looking out of the window, as has been popularly believed, Dr. James E. Lebensohn of Northwestern University reported to the American Physiological Society.

The illness is caused by the disturbance of the labyrinth of the ear due to the jarring of the car, Dr. Lebensohn stated. In his experiments subjects in the laboratory were able to follow a moving object which caused their eyes to move back and forth for hours without suffering any nausea. But when the up and down motions and slight jars of a moving car were reproduced in the laboratory, the carsickness resulted.

The same condition was produced when the labyrinth of the ear was stimulated by electricity, so that the fluid in the semicircular canals of the ear was continually disturbed, Dr. Lebensohn said.

It is this fluid which helps us keep our balance. When we are jostled or thrown off balance, the movements of the fluid make us conscious of the fact. It is thought that in conditions of jostling or jarring, such as on a moving street car, or on a ship in rough water, the movements of the fluid affect certain nerves so that nausea results. Dr. Lebensohn's experiments seem to confirm this theory.—Science Service.

SUBOCCIPITAL MENINGOCELE MASKING SYMPTOMS OF
BRAIN ABSCESS

REPORT OF A CASE*

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This case is unusual because of the coincident occurrence of a brain abscess and a suboccipital meningocele in the same adult patient, the two conditions apparently being unrelated etiologically. The discrepancy between the clinical signs and the enormous distortion of the hemispheres found post mortem is attributed to the presumption that the meningocele tended to equalize intracranial pressure by functioning as a spontaneous suboccipital decompression.

Case No. 30,440. Harper Hospital. July 15, 1929. Admission of a left-handed white girl, aged 21, with the complaint of recent headache, vomiting and difficulty with vision.

Past history. The patient was first seen in the outpatient department in February, 1919, at the age of 11 years, complaining of a "sore throat." Aside from enlarged tonsils, examination at this time disclosed numerous congenital anomalies. In the suboccipital region there was a soft swelling which was thought to be a cervical spina bifida. A roentgenogram of the spine showed bilateral cervical ribs and a fusion of the second, third and fourth cervical vertebrae. There was a bilateral hypertrophy of the trapezius muscles, more marked on

of headache, especially in the left occipital region, and vomiting. On July 6 she noticed that she would bump into objects to her right, but this subjective hemianopia was present only a few days. On July 10 a lump 4 cm. in diameter appeared behind the left ear. At this time the patient had a temperature of 100, but both the lump and the fever had disappeared when she entered the hospital on July 15, 1929.

Examination. The main findings on entrance were bilateral choked discs of 5 to 6 diopters; right internal rectus and abducens palsy; right nerve deafness; ataxic gait; and clumsiness in the movements



Fig. 1. Showing scalp-covered meningocele and large left hemisphere with flattened convolutions.

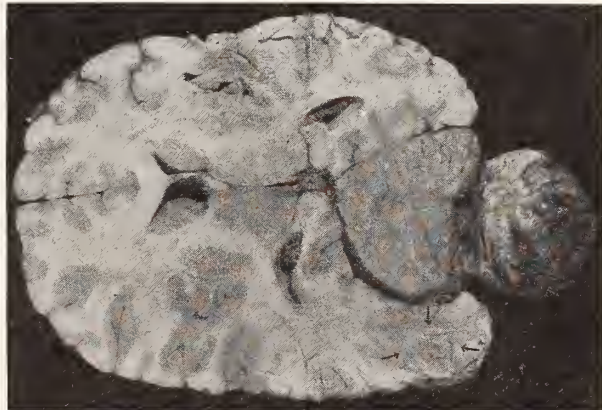


Fig. 2. Horizontal section viewed from above showing relation of meningocele to cerebellum and tip of abscess cavity. (cf. arrows) in left occipital lobe.

the left, and the head was drawn down and to the left. The toes of both feet were webbed. There was also an internal squint and myopia, for which glasses were prescribed. A psychiatric examination at this time records a somewhat subnormal mental development.

The child was seen over a number of years, during which time her tonsils were removed, her left trapezius sectioned, and a body cast applied to correct a curvature of the spine.

Present illness. The patient was quite well until the end of May, 1929, when she began to complain

of the right upper extremity. Perimetry was not done because of lack of coöperation, but at no time could any gross evidence of visual field defects be detected.

A tentative diagnosis of right cerebellopontile-angle tumor was made, but the headache and vomiting ceased, the swelling of the discs receded, the ataxia disappeared, and the acute symptoms cleared up so rapidly that the patient was discharged from the hospital August 11, 1929, and advised to report regularly for examination.

Subsequent course. A few weeks after discharge, the patient reported a period of vomiting and headache, but when examined after this upset she was cheerful and walking about without complaints. At this time she first came under observation of the writer. Ophthalmoscopic examination showed scarred nerve heads and 1 diopter elevation of the discs. There was not enough coöperation to make perimetric tests, but no gross visual defects could be detected. The suboccipital swelling was soft and about 5 cm. in diameter. Tests for cerebellar ataxia

*From the Surgical Service of the Harper Hospital, Detroit. The writer is indebted to Dr. Plinn Morse and Dr. Eugene Smith, Jr., for the specimen.

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were all well performed except that the movements of the right hand were somewhat more awkward than those of the left. It was also noted that the left half of the face and the left arm and hand were better developed than the right. Every finger movement of the left hand was duplicated by a corresponding finger movement of the right hand. When asked to write, the patient used her left hand, but made simultaneous mirror-writing movements with the right hand.

Although told to report every week, the patient was not seen again until her death six weeks later

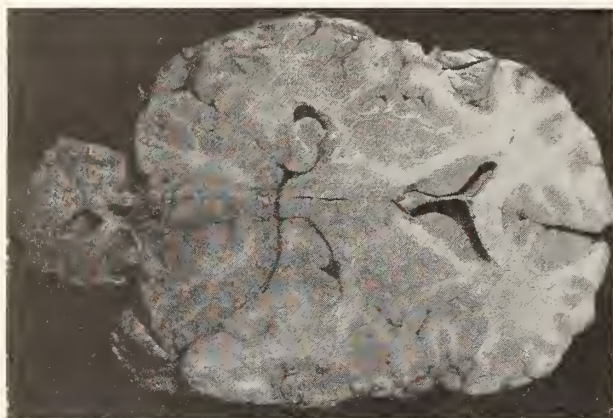


Fig. 3. Same section as Fig. 2 viewed from below, showing communication between meningocele and upper end of cisterna magna.

on October 7, 1929. Her family stated that she had felt very well until the day before death, when she became drowsy.

Post-mortem examination. In removing the skull cap, the suboccipital swelling previously mentioned was included in a V-shaped section of the occipital bone. The protrusion under the scalp proved to be a meningocele over the midline of the cerebellum just below the tentorium. It presented itself outside the

cranial cavity though an opening 1.5 cm. in diameter, being in the midline of the occipital bone.

The convolutions over the left cerebral hemisphere were widened and flattened (Fig. 1). The whole left hemisphere appeared to be one and a half times the size of the right. There was a fluctuating mass palpable in the left occipital lobe.

The brain was well fixed in formalin before sections were made.

In order to preserve the relationship between the meningocele and the left occipital mass, the brain was sectioned horizontally (Fig. 2). The left ventricle was found to be entirely occluded and the falx pushed over 2 cm. to the right. The fluctuating mass in the left occipital lobe proved to be a thick-walled abscess 2 cm. by 3 cm. by 5 cm., extending well to the cortex.

The cerebellar meninges formed a pedicle in the midline over the vermis. This pedicle extended through the opening in the occipital bone and then spread out to form the lining of a cavity in the meningocele 2 cm. in diameter, which was in free communication with the subarachnoid space at the upper end of the cisterna magna (Fig. 3). The meningocele was covered with the usual layers of the scalp.

There was no apparent connection between the meningocele and the abscess, nor was any etiology of the abscess disclosed.

Comment. The numerous congenital stigmata, the rapid subsidence of increased intracranial pressure and disappearance of cerebellar symptoms, and the general well-being of the patient when examined presented a confusing clinical picture. The post-mortem findings, however, were entirely out of proportion to the clinical signs, and it is concluded that the suboccipital meningocele acted as a decompression, thus masking the symptoms of the large brain abscess found at autopsy.

PSYCHOLOGISTS URGED TO AID OLDER WORKERS

The "unplumbed resources of the man and woman over forty"—a growing problem of industry and a growing personal problem throughout American homes—were brought strongly to the attention of psychologists as a field where their services are urgently needed, in an address by Dr. Lorine Pruette, before the New York Chapter of the American Psychological Association. Education is constantly lengthening the period of preparation before turning the boy and girl into productive work, and, at the same time, industry is tending to discard workers at a lower age limit, Dr. Pruette pointed out. "It becomes more and more a question whether we can, in the short productive period of maturity, do enough to provide for the long stretches of non-productive existence."

There should be a psychologist employed in every business organization of any size, Dr. Pruette continued, and he should be doing a great deal more

than discriminating between salesclerks and typists. The worker who is considered by employers as "too old" is often senescent in his attitude rather than in his glands.

"The sense of being at a dead-end, of growing futility of effort, and a frightened conviction of being without value is apt to come to every worker at some time," the speaker stated. "As we grow older, we are more liable to disappointments, while our capacity to reconstruct our interests declines. Here is a good psychological basis for the psychoses of later years. If the emotional adjustment to the job has not worked out satisfactorily, life must be a failure and old age a bitterness."

"It is my impression that the psychologist can be of service here, in helping the individual to comprehend his own resources and to understand the behavior of those about him. At any rate, surely, he can do more than leave the discouraged older worker at the mercy of various quacks."

—Science Service.

A CASE OF AGRANULOCYTIC ANGINA SUCCESSFULLY
TREATED WITH IMMUNO-TRANSFUSION*

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The following case is reported because it is thought that the employment of a specific therapeutic procedure brought about this patient's recovery. The forms of therapy used in the past in the treatment of granulocytic angina have consisted of the administration of diphtheria antitoxin, foreign proteins, arsphenamine, methenamine, mercurochrome and many other drugs without any apparent benefit. Improvement has been noted by some by the use of blood transfusions, sodium nucleate, anti-streptococcus serum, irradiation of the long bones with the roentgen-ray, while others have noted no improvement after the employment of these modes of therapy. Working on the hypothesis that the disease is of infectious origin, as claimed by Zadek (1) and Pelnar (2) and others, it was thought by the author that the serum from a recovered or convalescent patient might contain immune bodies. Accordingly an immuno-transfusion was performed in this case which it is felt resulted in her recovery.

Recently there have been reported in this country, and previously in Germany, quite a series of cases of so called agranulocytosis or agranulocytic angina associated with extreme or absolute leukopenia. In 1922 Schultz (3) reported six cases of this malady and in 1927 Kastlin (4) reviewed 43 cases which had appeared in the literature, adding two cases of his own. In 1928 Hueper brought the number of reported cases up to 125. Since this report many other cases have been recorded. The clinical and pathological aspects of this malady have been rather exhaustively reviewed by Hueper (5), Lovett (6), Potts (7) and others.

The disease is most frequent in middle aged women. Its onset is usually rather sudden though often it is preceded by a period of general malaise. The symptoms are a high fever, a fast pulse, sore throat, dysphagia and some dyspnea. Chills, a rash, herpes labialis, vomiting, diarrhea, abdominal pain and jaundice may occur but are not constant symptoms, the latter occurring in about fifty per cent of the cases.

*From the Department of Internal Medicine, Jefferson Clinic and Diagnostic Hospital. Presented before Wayne County Medical Society, December 17, 1929.

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Hemorrhagic diathesis is also found in a few but not all cases. The usual course of the disease is downward, death occurring in from two to seven days. A few cases pursue a chronic course with occasional remissions. However, the majority terminate fatally. The main findings in the physical examination are as follows: The tonsils are markedly hypertrophied and covered with rapidly spreading ulcers which extend to the gums, larynx, tongue, vagina and anal region. The submaxillary and cervical lymph nodes are enlarged and tender. There may be present a diffuse cellulitis in the neck. In the beginning the lungs are not usually involved though later a terminal bronchopneumonia often develops. The liver and spleen may be enlarged. The urine usually shows some albumin and the sediment casts, leukocytes and erythrocytes. A variety of organisms are found in the throat culture, including staphylococci, streptococci and pneumococci. *Bacillus pyocyaneus* has been obtained in cultures from the lesion, in the blood and in the spleen. The main feature is the change in the blood picture. There is a marked diminution in the white blood cells, in some instances to below 500. The granulocytic cells are the first to decrease and may eventually be completely absent. Degenerative forms may be found. There is also a lymphocytic decrease. The hemoglobin, red blood cells, platelet count and coagulation time are usually normal, and the oxydase reaction, Widal and Wassermann tests negative. Blood cultures are positive in about ten per cent of the cases.

Pathologically, the main changes are as follows: the ulcerations involve the tonsils, larynx, esophagus and all parts of the digestive tract. Subpleural, subpericardial

and subendocardial hemorrhages are frequently found. Liver, spleen and kidneys show cloudy swelling. The submaxillary, cervical and peribronchial and mesenteric lymph nodes are usually enlarged. The bone marrow is very characteristic. It is mainly made up of red marrow. Lymphoid cells

gums. For two weeks previous to this she had experienced a feeling of general malaise. A positive smear for *Borrelia Vincenti* was obtained and she was referred to the Medical Section for intravenous injection of neosalvarsan. She was given 0.4 grams of this drug. That afternoon she began to experience chilly sensations, a sore throat and vomiting. The next day her temperature was 102 F., her throat was very sore and she felt acutely ill. She was

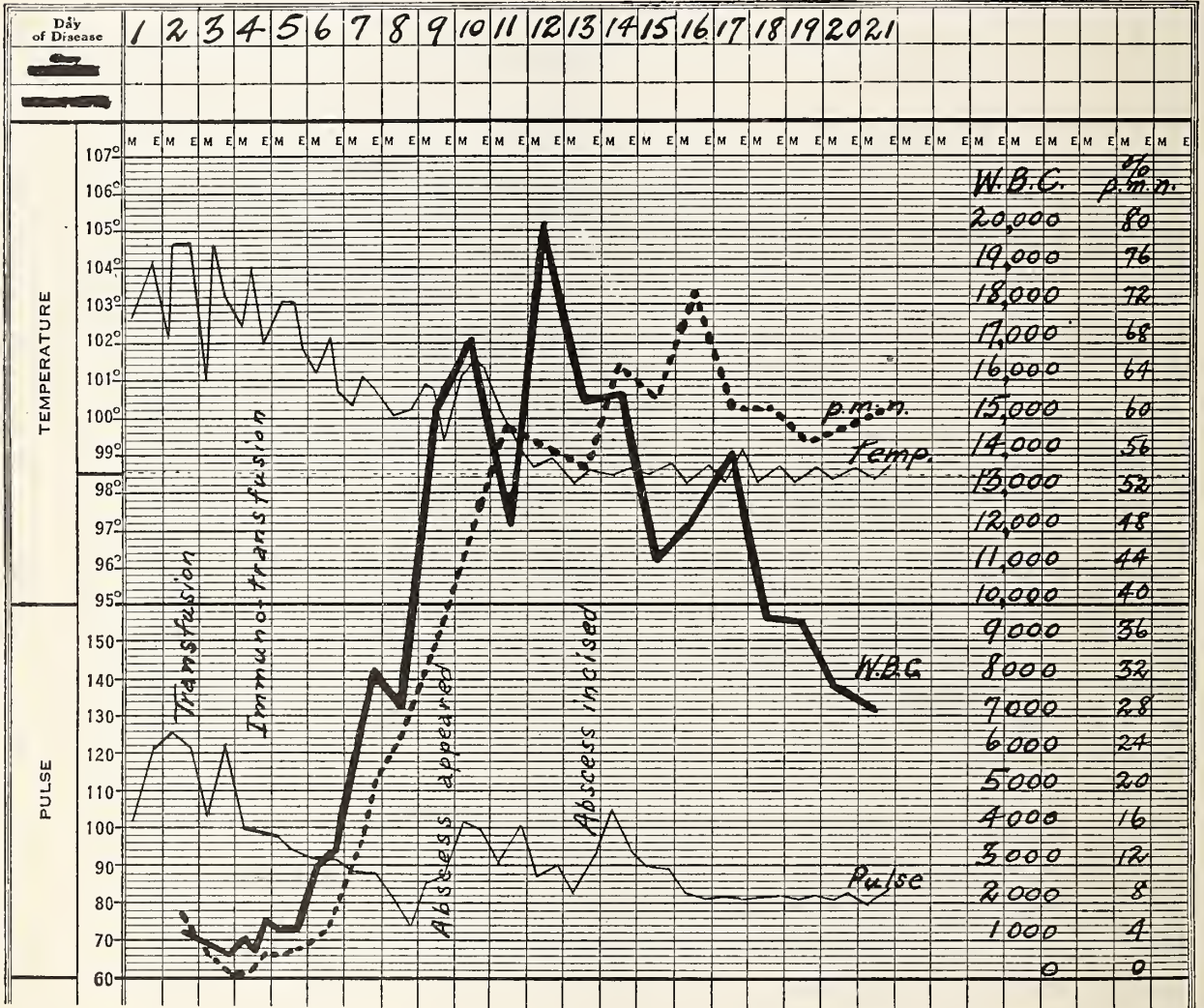


Chart illustrating patient's temperature, pulse, white blood count and polymorphonuclear count while in hospital.

are present mainly and erythroblasts and megakaryocytes are normal. There is almost a complete absence of granulocytic elements.

Accordingly to Hueper (5) the theories as to etiology may be grouped under three headings:

1. That it is the result of endocrine disturbance, as claimed by Friedman.
2. That it is in the group of the acute leukemias.
3. That it is an infectious disease which especially affects the granulocytic system.

Case Report: S. H. (H-3250), aged 24 years, a nurse working in the operating room, reported to the Dental Section of the Clinic complaining of sore

admitted to the hospital and the physical examination revealed the following positive physical findings: The cheeks were flushed and the skin hot and dry; her tonsils had been previously removed. The throat was markedly injected and there was some swelling of the soft palate and pillars with a few ulcerations in region of lingual tonsils. The gums were covered with a dirty grayish white exudate which later extended to the pharynx and larynx. The cervical and submaxillary glands were large and tender and there was a cellulitis of the neck on the right side. Other lymph glands were normal. The liver and spleen were not palpable and physical examination otherwise was negative.

Her family history was negative. Her past history revealed that she had had a tonsillectomy five years previously, influenza eleven years ago and a recent mild antrum infection.

Laboratory Findings: Urine: cloudy, specific grav-

ity 1.022, reaction acid, trace of albumin and 3 white blood cells to the low microscopic field. Blood: hemoglobin 88%, red blood cells 4,750,000, white blood cells 1,200, polymorphonuclear leukocytes 6%, lymphocytes 94%. Repeated cultures from the throat showed the presence of staphylococci. Blood culture was negative. The blood non-protein nitrogen was 20.1 mg., sugar 110 mg., urea 28.5 mg., and chlorides 412.5 mg. per 100 c.c. The culture from the cervical abscess showed the presence of staphylococci. The clotting time was 5 minutes by the capillary tube method.

A graphic chart has been made illustrating patient's white blood cell picture while in the hospital. Aside from the symptomatic treatment the following procedures were employed. The first day after admission the patient was given an ordinary transfusion of 500 c.c. of unmodified blood. The next day her white blood count had dropped from 1,200 with 6% polymorphonuclear leukocytes to 600 with no polymorphonuclears and her condition was definitely worse. The second day she was given 25 million dead typhoid germs, in the hope that non-specific protein therapy might be of benefit, and also an ampoule of sodium nucleate. The improvement was not noticeable and then an effort was made to locate a suitable donor who had recovered from this disease. After much difficulty a thoroughly authentic case, who had been sick in the Herman Kiefer Hospital in 1927 (8) with agranulocytic angina and whose white blood count at that time had dropped to 850 with 8 per cent polymorphonuclears, was located. This party happened to be of the same blood grouping as the patient and a direct transfusion of 500 c.c. of blood from the convalescent donor was performed by Dr. O. A. Brines. Immediately the patient seemed subjectively better. The next day her temperature had dropped from 104 to 103 and her white blood cell count went from 750 with no leukocytes to 1,200 with 2 polymorphonuclears. Subjectively she was much improved, throat was not so sore and there were definite signs of localization in the inflammatory area in the right cervical region. The second day after transfusion her white blood cell count was 3,200 with 6 polymorphonuclears and the third day 7,800 with 21 polymorphonuclears. She was given a few more injections of sodium nucleate but it was not felt that these had any visible effect upon her condition as there was only a transient rise in the leukocyte count after both typhoid and sodium nucleate were administered. Sodium nucleate along with other therapy has also been given in several of the local hospitals with conflicting reports as to efficacy (9). The eighth day she had a profuse hemorrhage from the throat of about 1,000 c.c. and on the ninth day from the bowels. She was again transfused from an ordinary donor this time with improvement. On account of the anemia which had developed two days later she was again transfused from an ordinary donor. The mass in

the right cervical region went on to suppuration and the patient made an uneventful recovery.

A study of this case and a review of the literature would seem to justify the following conclusions:

1. Most attempts at therapy in this disease have been futile in the past.
2. A hemorrhagic diathesis may be a prominent symptom.
3. It is felt that the cervical abscess with leukocytosis may in turn have hastened the convalescence during the latter course of the disease.
4. Patient's condition was not improved but was definitely worse after employment of an ordinary blood transfusion, a frequent observation.
5. No cases have been reported in the literature in which an immuno-transfusion was employed.
6. It is suggested in those cases where donor's blood does not match that of the patient, that the donor's immune serum be employed.
7. While it is realized that no definite conclusions can be drawn from one case, the marked improvement made in this patient's condition after the employment of an immuno-transfusion is certainly suggestive of the infectious origin of the disease and of the presence in recovered patients' serum of immune bodies.

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SPINAL ANESTHESIA*

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and

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In 1885 Corning of New York while experimenting on a dog by injecting 2 per cent cocain in the lower dorsal region noted once that he obtained paralysis of motion and sensation which lasted for five minutes and was followed by complete recovery. He next injected this into a man, believing it to be extradural, and obtained anesthesia for eight minutes followed by recovery. He reported his findings with this conclusion: "Whether the method will ever find an application as a substitute for etherization in genito-urinary or other branches of surgery further experiences alone can show. Be the destiny of the observation what it may, it has seemed to me, on the whole, worth recording."

With the introduction of the lumbar puncture by Quincke in 1891 this method was further encouraged. In 1898, August Bier of Bonn, with great courage, first had the method tried on himself by his assistant. Anesthesia was perfect followed by a slight headache. Bier used cocain as the anesthetic agent, but the vomiting, syncope and headaches were so severe that its use was given up in Germany. In France, however, Tuffier continued to use it despite great opposition. It was only in 1904, with the introduction by Fournneau of stovain and novocain by Einhorn, that interest again arose in spinal anesthesia. During the last generation the technic was developed by Allen, Babcock, Barker, Labat and Pitkin; and now it is one of the safest anesthetics.

INDICATIONS

1. Old age and debility—with regard to post-operative pneumonia
2. Diseases of the kidney
3. Diseases of the liver—disturbance of glycogenesis
4. Diseases of the lungs,—bronchitis, pneumonia, tuberculosis, abscess, bronchiectasis
5. Diseases of the heart
6. Hypertension
7. Acute upper respiratory infections
8. Emergency operations
9. Eclampsia

*Read before the Detroit Academy of Surgery, April 10, 1930.

†Dr. Walter Hackett graduated from Toronto University 1910; he has practised in Detroit ever since and is at present attending surgeon St. Mary's Hospital, Detroit.

‡Dr. David Solkin graduated from Toronto University, 1929.

10. Diabetes
11. Intestinal obstruction

CONTRA-INDICATIONS

1. Marked involvement of C. N. S.—tumor, hemorrhage, syphilis, meningitis
2. Hypotension
3. Severe traumatic shock
4. Surgery above diaphragm
5. Suppuration at site to be punctured
6. Septicemia
7. Severe jaundice

ADVANTAGES

1. No loss of consciousness and minimal disturbance of the patient's equilibrium
2. One may give fluids and food up to the time of operation
3. Emergencies—no need of a trained anesthetist
4. Analgesia is perfect and muscle relaxation is more complete than under deepest ether anesthesia
5. Intestines are contracted and fall away from abdominal wall
6. Less post-operative complications—pneumonia, emboli, pulmonary edema
7. Minimal amount of nausea, vomiting and distension
8. Minimal post-operative shock

DISADVANTAGES

1. Not a general anesthetic and not desirable in certain neurotics
2. Not suitable in young children
3. Definite limit to duration of anesthesia
4. Remote ill effects

USES

A. Medicine—

1. In severe, painful conditions below the diaphragm.

B. Obstetrics—use here is not fully determined. The uterus is stimulated to contraction and hemorrhage is less—it certainly should be tried.

C. Surgery—

1. Operations in lower extremities and hips.
2. Fractures of lower extremities—reduction.
3. Proctology.
4. Genito-urinary surgery.
5. Abdomen and pelvis.

INSTRUMENTS USED

1. Hypodermic syringe (2 c.c.) and needle
2. Novocain—2 per cent
3. Ampule of novocain-ephedrin solution
4. Two B-D No. 22 gage flexible, rustless steel spinal needles
5. One B-D syringe to fit needles
6. Two ampules of novocain crystals—120 mg. each
7. Allis forceps—to determine height of anesthesia
8. Scalpel
9. Ephedrin, adrenalin, oxygen tank, saline

TECHNIC

Patient lies on the side with the head and knees flexed, with the back perpendicular to the table. The back is prepared with alcohol and iodine or picric acid and draped. The space to be injected is selected and a wheal is made with the novocain, carrying the injection down into the interspinous space. A nick is made in the skin with a scalpel and the spinal needle is inserted in the mid-line perpendicular to the back. The spinal fluid comes out drop by drop and is collected in the ampule containing the novocain. Only one of two c.c. fluid is required. The mixture is then collected in the spinal syringe, locked onto the needle within the canal and the fluid drawn out and re-inserted several times. For high anesthesia one mixes four or five times with a moderate amount of force.

Another method of obtaining the desired result is to draw out a certain amount of fluid, put the crystals in and quickly replace the fluid. For pelvic work draw out 4 c.c.; for the lower abdomen 6 to 8 c.c.; for the upper abdomen 8 to 12 c.c.

Spinocain is lighter than spinal fluid and the patient's head must be kept low. Novo-

cain is heavier than spinal fluid, and theoretically one should keep the head high; but as a matter of actual fact, the patient may be put into the Trendelenburg position immediately with no ill results. The novocain is so quickly absorbed by nerve tissue that, on lumbar puncture, it does not reach the cervical cord.

ERRORS IN TECHNIC

1. Patient in improper position
 - a. Back not bowed sufficiently
 - b. Back not perpendicular to table
2. Insufficient anesthesia of skin and interspinous space
3. Insertion of the needle
 - a. Needle not in space
 - b. Needle not held perpendicular to the back
 - c. Needle not put exactly in the mid-line
 - d. Needle not inserted in the proper direction parallel to the spines
4. Needle just outside of the subdural space so that proper mixing does not occur and the novocain inserted not into the subdural space
5. Breaking of the needle—occurs when
 - a. The needle is bent too much
 - b. Needle pushed against bone
 - c. Fault of the needle itself—weakness at a point

One may confidently say that the several cases which have failed under spinal anesthesia were due entirely to improper technique—mainly the failure of striking the canal or improper mixing of the spinal fluid.

PHARMACOLOGY OF INTRASPINAL NOVOCAIN

The accompanying phenomena during the spinal anesthesia include changes in sensation, changes in motor power, cardio-vascular changes, respiratory changes and changes in the gastro-intestinal system.

The *subjective phenomena* begin with a feeling of heaviness in the legs, then numbness and then "the legs are asleep." One gets in order a loss of the sense of pain, then touch and then muscle power. The extent of the anesthesia depends upon the amount of the drug used, the amount of mixing, the point of injection and the force used during injection.

The *cardio-vascular* changes include a fall in blood pressure, and the slowing of the pulse rate. The fall in blood pressure is due to the ascending root paralysis and this

is proportional to the number of roots involved between the third lumbar and first thoracic from which we have the sympathetic autonomic outflow. Also there is a blocking of the augmentor sympathetic nerves which emanate from the first to the fourth thoracic and thus allows the vagus greater play. Another factor mentioned is the paralysis of the muscles of abdomen and thorax and a smaller volume of blood is sent to the heart by decreasing the aspirating action of the thorax. The slowing of the pulse results from the greater play of the vagus nerve and the accompanying cardiac and bulbar anemia due to the lowered blood pressure.

The *respiratory system* shows a certain amount of depression, particularly in high anesthesia. Blocking of the sixth thoracic nerve causes abdominal paralysis; of the seventh thoracic intercostal paralysis; of the second cervical causes a cessation of diaphragmatic breathing.

The *gastro-intestinal system* has three nerve supplies, viz.: the plexuses of Auerbach and Meisser which act when the other nerves are blocked and have the sole reaction of producing contraction above and relaxation below the point stimulated. The sympathetic nerves to the intestine arise from the fifth thoracic to the second lumbar and exert tonic inhibition on the movements of the gut. The parasympathetic system includes the cranial branches through the vagus which controls the gut down to the transverse colon and the sacral branches through the pelvic nerve which supply the remaining part. This system increases the movement of the intestine.

During spinal anesthesia the vagus nerve is given full play, causing increased contraction of the whole small gut, ascending and transverse colons. Since the pelvic nerve is always blocked, one gets a relaxation of the anal sphincter. The sympathetic and pelvic nerves being paralyzed, the vagus nerve and the myenteric system become overactive, produce increased peristalsis with a relaxed anal sphincter.

CARE OF THE PATIENT

A. Pre-Operative—

1. Breakfast may be given (toast and coffee) one hour prior to operation if the stomach is not included in the operation. All 9:00 o'clock patients get this.

2. Blood pressure P. M. and A. M. before operation.
3. Preparation of the back.
4. Give enema night before operation.
5. The night before the operation give veronal gr. X in milk, or some other sedative.
6. One half hour prior to operation give
Morphia gr. 1/4
Scopolamin gr. 1/150

B. During the operation

1. Plug ears with cotton
2. No loud or unnecessary talking
3. Cold towel over patient's forehead and mask over eyes
4. Get patient's mind off the proceedings
5. One should have at hand pituitrin, ephedrin, adrenalin, caffeine-sodium-benzoate and oxygen
6. Blood pressure to be taken at least every 5 minutes:—
Above 80 mm. Hg.—good
80 to 50 mm. Hg.—stimulants
Below 50 mm. Hg.—saline intravenously

C. Post-Operative

1. Elevate foot of bed 12" for 12 hours unless contra-indicated, viz., use of Fowler's position, hypostatic pneumonia
2. Hot cup of coffee or tea as soon as patient is in bed
3. Take pulse and respirations at least once in the first 2 hours
4. Soft diet on either first or second day
5. Morphine gr. 1/4 p. r. n. in first 48 hours

COMPLICATIONS DURING THE OPERATION

These are mainly three in number and do not occur often. In our series they occurred in one case out of 10 ranging from mild to severe. The more carefully the anesthesia is done, the fewer are the complications. They are vasomotor paralysis, respiratory collapse, shock and syncope.

Vasomotor paralysis is shown by nausea and vomiting, pallor, slow pulse, low blood pressure, cold sweats, air hunger and mania. Prophylactic treatment is shown by a proper attention to the blood pressure and to the use of stimulants at a proper time; deep breathing during the operation; and prevention of massive doses of novocain. Treat-

ment includes lowering of the head, adrenalin and ephedrin, saline intravenously and oxygen.

Respiratory collapse is shown by air hunger and then a cessation of respiration. It is almost impossible to paralyze the cervical part of the cord if the puncture is done in the lumbar area. Treatment includes artificial respiration and vasomotor stimulants.

Shock and syncope is evidenced in milder degrees by nausea, a feeling of faintness and a slight amount of vomiting. It occurs usually on rough handling of the gastro-intestinal tract and in our series occurred in only three cases out of 50.

The action of the blood pressure is shown by the accompanying three graphs. In about 50 to 60 per cent of our cases we do not use any vasomotor stimulants at all.

DOSAGE OF DRUG AND DURATION OF ANESTHESIA

Evans advises the use of 10 mg. of novocain for every 15 lbs. body weight with the maximum of 120 mg. In our hands, however, we have found better use with 240 mg. novocain for normal adults. In the old and younger folks, or those of light weight, we use 120 mg. In the average adult case we get anesthesia of the maximum duration of $1\frac{1}{2}$ hours for abdominal cases, and up to $2\frac{1}{2}$ hours for rectal and perineal cases.

We have had no experience using this anesthesia in children.

POST-OPERATIVE USE OF NARCOTICS

In our hands there have been no remarkable changes in the use of morphine and codein post-operative. The amounts used are approximately the same for both spinal and ether anesthesia as found by comparing similar operations under both types of anesthesia.

POST-OPERATIVE COMPLICATIONS

The possible post-operative complications are:—

1. Headache
2. Nausea and vomiting
3. Distension
4. Neuritis
5. Paralysis
6. Pulmonary complications
7. Meningitis and meningismus
8. Remote results

HEADACHE

This is the commonest complication rang-

ing from mild to severe and is very annoying. The headache is of two main types, viz., the irritative or meningismus type, and lumbar puncture type.

The irritative type of headache is caused by the irritation of the dura due to rough insertion of needle or frequent puncture resulting from poor technic. This headache is relieved by an ice bag to the head and aspirin or codeine. Fortunately in a series of 65 cases we have not had one case of headache of this type.

The lumbar puncture headache is more frequent and in our series of 65 cases occurred in 17, that is, 25 per cent. Most of these headaches were obtained by using spinocain or where the foot of the bed was elevated only for 2 hours. With novocain on keeping the head low for two hours, we have had two headaches in eleven cases; and on keeping the head low for 12 hours in 3 cases out of 25, that is, in 12 per cent. Thus we may say that in our hands headache occurs (generally mild) in 12 per cent, or one case out of eight.

The headache is explained by the loss of spinal fluid into the tissues produced by the open flap of dura; and treatment is based upon this principle, namely, to make up spinal fluid loss.

Prophylaxis of the headache includes:—

- a. Elevation of foot of bed 12" for 12 hours—this causes venostasis and greater production of spinal fluid, and minimizes the fluid leakage for it tends to go toward the head.

- b. Use of a small needle.

- c. Not too many punctures.

In case the headache occurs:—

- a. Continue elevation of foot of bed 12 to 24 hours more.
- b. In mild cases give adrenalin or pituitrin—to increase blood pressure and spinal fluid production.
- c. Force fluids.
- d. In severe cases, give 200 c.c. of $\frac{1}{2}$ normal saline intravenously. This relieves the headache in $\frac{1}{2}$ hour; and we have had occasion to use this only once with perfect results.

Nausea and vomiting occurred in 10 out of 60 cases and was severe in only two cases—one a gangrenous appendix and the other a post-operative intestinal obstruction (volvulus). In the other 8 cases it was

mild, occurred on the second day post-operative and only one case required gastric lavage.

How do these results compare with ether anesthesia?

Distension occurred in 4 out of 65 cases and in three of these it was mild. The other was a case of obstruction. Relief was entirely obtained by pituitrin, rectal tube, eserine, or enemata.

Neuritis occurred in a mild form as sharp shooting pains in the legs for two days in a case where a broken needle was still in the spinal canal. It was relieved entirely by several doses of aspirin and did not recur for the three weeks later during which she was under observation.

Paralysis. We have had no occurrence of. Such a condition is probably due to high or poor puncture and damage to the cord itself.

Pneumonia occurred in only one case, in a woman 73 years old who had a poor circulation and dulness at the lung bases, but in whom an operation was imperative. One woman showed three peculiar attacks simulating pulmonary edema, but she recovered completely within normal time. In fact, we have operated upon eight cases presenting poor circulation, bad heart or acute bronchitis in whom operation was necessary.

It has been claimed by one person that several cases of spinal cord sclerosis occurred some years after the use of spinocain anesthesia. It is blamed upon the alcohol

and the starch in the spinocain solution. How much truth there is in this finding we do not know. Novocain is not a sclerosing drug and no ill effects have been reported following its use. Whether there are future psycho-neurotic symptoms following novocain anesthesia, we also do not know. But in those cases where one had an opportunity of seeing the patients some months later, no such complications were present.

One case felt some pain during the operation, but this was due to the improper mixing of the spinal fluid, as later on the anesthesia became complete. One case, at the end of the operation, reacted violently to cold alcohol sponges, but not to cutting or pinching. One case went into a severe shock at the same time when cautery was applied to the cervix.

One peculiar case with a marked increase in spinal fluid pressure had duration of anesthesia for $\frac{1}{2}$ hour, although she was given 240 mg. of novocain, and was a small woman.

CONCLUSION

Although our experience is still limited, we firmly believe that spinal anesthesia with novocain is beyond the experimental stage and has become established as a great aid to surgery. In properly selected cases for surgery below the diaphragm, properly administered, with a good knowledge of its complications and method of administration, spinal anesthesia is the most ideal and the most satisfying method.

THE VALUE OF VISUAL FIELD STUDIES*

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The title is so broad that I propose only to emphasize the practical value found in such studies of patients having chronic simple glaucoma, and secondly, such studies of certain pathway lesions. The value of field studies of glaucoma patients is conveniently discussed under the following headings:

1. Diagnosis.
2. Prognosis.
3. Treatment.
4. Investigative and research problems concerning the disease and the mechanism of field changes.

*Read before the 109th Annual Meeting of the Michigan State Medical Society, Jackson, Sept. 17, 18, 19, 1929.

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Presumably, when in the earliest stages of the disease, the field changes are transitory and minute. Practically, one sees patients after the disease is established and considerable damage has been done. It is a fact that field changes can be found prior to constant high tensions and before definite nerve head changes are visible. Always, in making a diagnosis of glaucoma, consider the

From the angle of prognosis, perimeter and tangent screen studies are indispensable. Vision is centrally lost late in the disease and such records, therefore, aid but little in measuring the activity of the disease. We can safely rely upon the field findings in our management of this difficult group of patients. Fields that hold or gain mean sat-

especially with irregular tension measurements, improves with either kind of operation. The group showing losing fields and comparatively level, and especially nearly normal or normal tensions, are not helped proportionally by surgical interference. Of course, technical advantages may be offered by a certain type of operation in the indi-

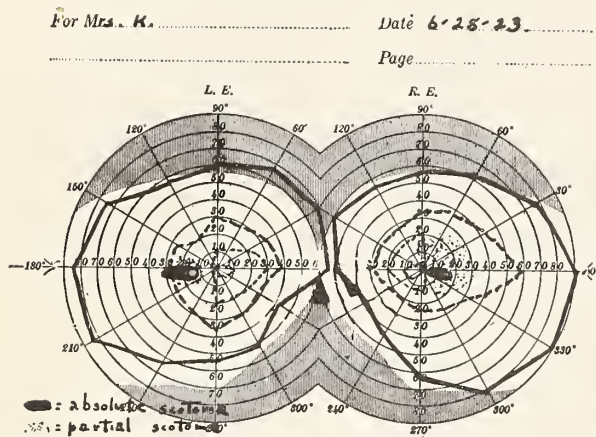


Fig. 6, Mrs. K., bitemporal hemianopsia for small test objects and for green. Straight enlarged blind spots as part of a developing bitemporal defect. Vision with correcting glass 6/15ths O.U.

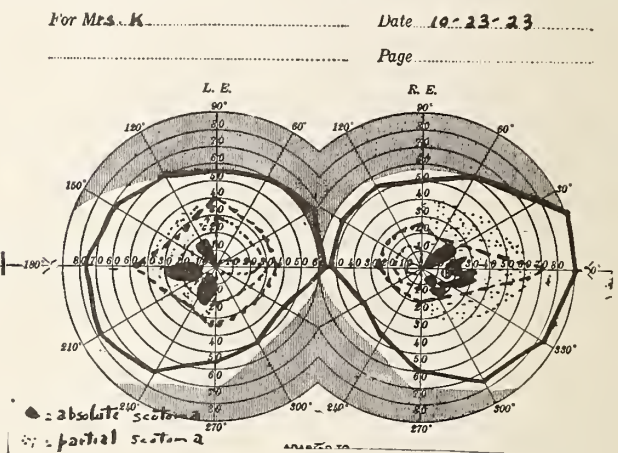


Fig. 7, Mrs. K., about 4 months after the field shown in Fig. 6, and shows the more elaborate bitemporal defects.

isfactory treatment. Fields not holding mean unsatisfactory or hopeless treatment, with the corresponding prognosis. The surgeon, with a series of tonometric measurements and a group of field charts before him, is usually in a position to decide what to do or not to do and what will be the probable outcome of his treatment. It has been my observation, with many others doubtless, that in the group of patients with early central loss with fair peripheral field retention there are often inflammatory changes. The prognosis is then that of glaucoma plus central retina disease or of a glaucoma complicating a uveitis.

Treatment is best conducted in this disease after a consideration of the prognosis. Our field studies are important in advising when to shift from medical to surgical types of treatment, or whether surgical treatment is practical. The size of field, the rate of loss, the character of the changes about the fixation point must be analyzed. Some feel that with central field loss or defects invading the central area surgical treatment is best denied. As to the variety of surgical interference, iridectomy or filtration under a flap, to be used upon the patient presenting a large field loss, it has been my observation, and doubtless that of others, that a losing field, combined with fairly high or

visual patient and the favor of the surgeon is toward that best suited to his experience.

As to the research problems open for investigation upon the mechanism of field loss, anatomy, physiology and pathology are combined in a trinity very difficult to unravel. Clinically, it is an investigative region open to all, and accurate clinical observations are quite as important as those made in the laboratory.

The slit-lamp is fascinating and useful, the perimeter is a duller, but more valuable, instrument. The value of the latter instrument is especially emphasized in the study of visual pathway lesions. I should like to present three patients' records and show their field findings:

Case 1. Mrs. D., age 42, gave a history of two weeks' blurred vision. The eyes had been examined elsewhere six months before and glasses prescribed. Her general health had been good except that she had what she described as mild rheumatism, for the relief of which she avoided sugar and starches. She had not menstruated for sixteen months. During the past summer she had several mild dizzy spells with slightly blurred vision which lasted ten to fifteen minutes, but not followed by headaches. A breast tumor had been removed four years before.

Examination of this patient's eyes showed vision in the right eye 6/15, left 6/15; with an astigmatism correction her vision improved to 6/4 in each eye. She needed an additional glass for reading purposes. Measurements of her muscle balance showed no error. Ophthalmoscopic examination showed doubtful pallor of the nerve heads, but not significant in degree. Intra-ocular tensions showed

normal measurements. Visual field examinations showed homonymous hemianopsia for colors, practically complete, and partial for form. The retained portions of the fields were practically normal (Fig. 4).

An X-ray examination of the skull was negative except for prominence of blood vessels in the frontal fossa and some added density in the upper frontal

eral ventricle was opened, followed by a gush of fluid. At this time a cyst was opened just below the posterior horn of the lateral ventricle and finally the entire lobe was removed in one piece. The tumor had then pierced the under surface of the occipital lobe and had been in contact with the meninges. Frozen sections showed the tumor to be carcinoma, so that the wound was closed without

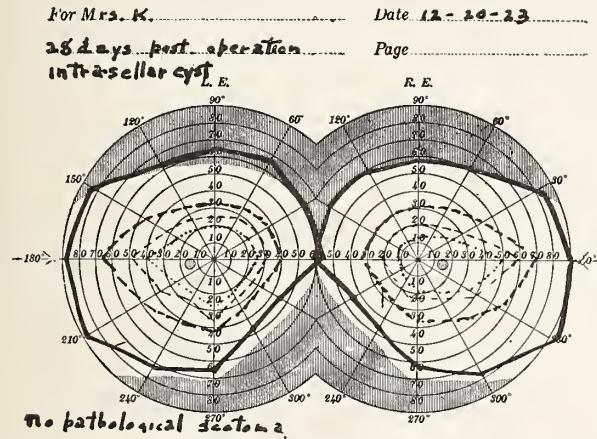


Fig. 8, Mrs. K., shows recovery of fields following successful puncture of an intrasellar cyst. Vision corrected 6/6ths O.U.

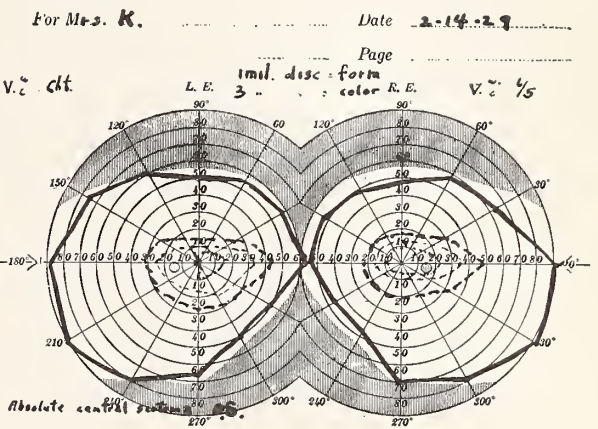


Fig. 9, Mrs. K., about six years after the operation; with small absolute central scotoma in the left eye. V. O.D. with glass 6/6ths; O.S. chart perception.

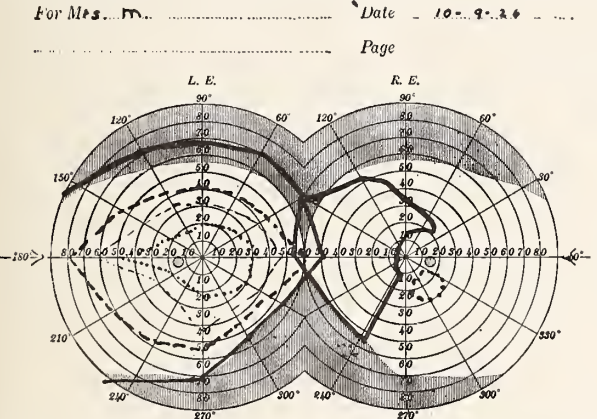


Fig. 10, Mrs. M., shows large temporal loss including fixation area in the right eye. Some suggestion of bitemporal loss. V. O.D. 6/4ths; O.S. 6/40ths.

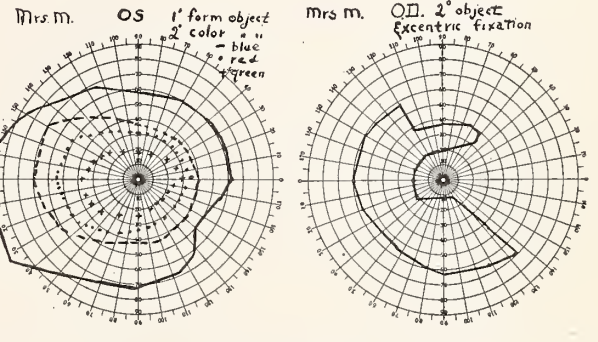


Fig. 11, Mrs. M., a later field without bitemporal suggestion; 1-23-29.

area and posteriorly; in other words, essentially negative. There was no evidence of pituitary disease. This patient was advised that she had a serious disturbance in her head affecting certain visual nerves. She was further advised to have a complete neurological examination made, and to return for further study. The patient wished to have her glasses corrected and said she would think the matter over. Like many another receiving bad news, she sought more cheerful advice elsewhere.

She reappeared again approximately six months after the first examination. At this visit she stated she had been in a local hospital for six weeks, at the conclusion of which time no diagnosis had been told to her. On her own initiative she went to Baltimore, where she had a neuro-surgical operation done by Dr. Walter E. Dandy. His operative notes described resection of the right occipital lobe. A right-sided bone flap was turned down a little more posteriorly than usual in order to expose the occipital lobe. ("Dura was under terrific tension.") Surface indications in the brain exposed suggested tumor, viz., there was softening and difference in color of the convolutions. Incision was carried through the depth of the cortex until the tentorium and falx were reached. Posterior horn of the lat-

attempting to restore the dura or bone. Visual field examination after operation showed complete homonymous hemianopsia for colors (Fig. 5).

Case 2. Mrs. K., age 56, married, came to see us about seven weeks after the illness began, when she noticed confusion of letters while reading. She had had no past illness of significance. She had not menstruated for two years; there was sudden cessation. Her weight in three years had increased nearly thirty pounds. She wore larger sized gloves without change in shoe size. Examination showed vision in each eye 6/30, with glasses 6/15. The ophthalmoscopic examination showed the nerve heads to be perhaps somewhat waxy in appearance without loss of substance. There was a moderate arterio-venous compression. The retina and macular area were slightly edematous. Left eye showed the same picture with more blurring of nerve and a few white spots scattered in and about the macula. Visual field examination showed bitemporal hemianopsia for red and green 1 mm. discs; blind spots were both enlarged. In the region of the blind spot there was an area showing a partial scotoma. There was some contraction of the form fields in the temporal aspect of the left eye (Fig. 6). X-ray films were made and showed almost complete

destruction of the posterior clinoid process, according to Dr. Evans, with atrophy of the floor and anterior clinoids.

The diagnosis was pituitary tumor. The patient was put upon two-grain whole gland pituitary extract tablets by mouth three times daily, which relieved her headaches. The process advanced as shown clearly by progressive field changes (Fig. 7). The patient consulted Dr. Cushing, who did a trans-sphenoidal puncture operation upon a sellar cyst. Following the operation the bitemporal hemianopsia field defects were recovered (Fig. 8). Prior to her operation this patient went through a series of examinations at another hospital, and because the visual field examinations and X-ray of the sella were not done, remained undiagnosed. This woman has remained in good health since her operation and has been in at intervals for visual field examinations. The vision returned to normal in each eye until five years after the operation, at which time we found the vision of the right eye 6/6, left eye chart perception. Visual field examinations then showed a small, absolute, central scotoma in the left eye. This central defect has persisted since. I am at a loss to explain why (Fig. 9).

Case 3. Mrs. M., referred through the kindness of Dr. William Gordon, gave a history of having noticed for eight months poor vision with her right eye, that she could see better around an object than directly at it. There was no pain but just prior to the noticed loss of vision she had severe headaches. Examination showed vision: right eye 6/40; left eye 6/4. The ophthalmoscope showed in the right eye a slightly blurred nerve head with edema under two diopters in amount. There was slight venous enlargement with some suggestion of increased tortuosity of the vessels. The left eye showed a similar picture. Visual field examinations in the right eye showed right-sided half loss, including central scotoma; in other words, she had a right temporal defect in the fields with a large central scotoma (Fig. 10). X-ray examination of the head showed nothing of significance. General physical examination was absolutely negative.

There were a number of possibilities to be considered for a diagnosis in the absence of sellar changes. We felt it likely that there was a parasellar growth, possibly a meningioma. One must also consider the possibility of a glioma in the chiasm. The incongruity of field defects suggested a chiasmal involvement. The patient's age was against this and such tumors are rare, and because this patient's visual fields at times showed a suggestion of bitemporal character, we thought glioma of the chiasm not likely. Gummatous meningitis could safely be discarded. An aneurysm could be considered but our patient did not have any peripheral nerve lesion. Tumor, Rathke's pouch, was to be considered, but these are practically congenital, found early in life and show, according to Cushing, in eighty per cent of the cases, suprasellar shadows from calcification. It should be mentioned, though, that it is possible for an elderly person to have these tumors without calcification and without deforming the sella, in which case it can not be differentiated from a meningioma. Still another possibility which has been discovered by Cushing is that of chronic cisternal arachnoiditis. These patients, due to an old inflammation, have a local collection of fluid trapped in the thickened arachnoid membrane which gives symptoms of tumor. We have left the group, well presented by Holmes and Sargeant, although described many years before, a meningioma arising from the tuberculum sellae. It is pointed out by Cushing that these patients, if treated early surgically, are inclined to do well. The development of field changes in this patient will confirm our opinion concerning the location of the lesion.

These three patients emphasize sharply the importance of field studies. In two, other findings were negative or non-localizing in character. And in the other the diagnosis and something as to prognosis and treatment were written in the field findings.

RECENT COMPENSATION DEVELOPMENTS*

L. H. CHILDS, M.D.†

FLINT, MICHIGAN

The relationship of the industrial surgeon to the Michigan Compensation Act varies a great deal. In some institutions he is the sole arbiter, while in others he is entirely dominated by allied branches such as the legal or personnel departments. Whatever may be the set-up in your individual case, we are all faced by the same general problems and these, of necessity, cannot be met fully without a basic knowledge of both the Michigan Compensation Act and the recent legal interpretations of this act. It is therefore, to be assumed that we are all vitally interested.

I fully believe that, at this particular time, we can do about as much good by enforcing one small neglected portion of the Michigan Act, as we are doing by the usual routine

repair of damaged workmen, and it is to this section that I will devote the greater part of my allotted time.

In supervising the application of the compensation act in industry, several very basic things must be conceded:

First, the industrial surgeon *must* be absolutely impartial.

Second, we *must* accept the law as writ-

*Presented at the Fifth Annual meeting of the Michigan Association of Industrial Physicians and Surgeons at Flint, Michigan, April 25, 1930.

†Dr. L. H. Childs graduated from University of Michigan 1910; internship Assistant Surgeon United States Public Health Service; practice two years in Detroit; Surgeon Ford Motor Company about three years; Chief Surgeon Chevrolet Motor Car Company of Flint thirteen years; work confined to industrial surgery for last sixteen years.

ten, and as interpreted for us by the Department of Labor and Industry, and by Our State Supreme Court. Unfortunately the workman, all too frequently, feels abused because we cannot rewrite the act, to comply with his own desires, and to favorably conform to his individual case. The rules of procedure are given us and we have no choice but to accept them.

Third, the employer *must* assume a fair attitude. Industry, in my experience, not only wishes to comply with the act but insists on giving the employee the benefit of any existing doubt. Viewed broadly I have yet to find a basic compensation problem wherein that which is best for the workman is not best for the employer, or, stating it reversely, that which is best for the employer is best for the employee. Any deliberate attempt to favor either side of the question is unpardonable. Border line cases may be left to the discretion of the board.

The interpretation of the Compensation Act, by the Department of Labor and Industry, and by the Supreme Court, varies from time to time, frequently to the point of complete reversal. In fact if one tries to keep up with the rulings and opinions as expressed by the board, the Supreme Court and the best informed attorneys, his impressions become quite like those of a motion picture film, ever changing and still positive at any given time. At the present time Section 2, Part II, is to me the most interesting portion of the entire act. It reads as follows:

INTENTIONAL AND WILLFUL MISCONDUCT

"If the employee is injured by reason of his intentional and willful misconduct, he shall not receive compensation under the provisions of this act."

For years this section might just as well have been left out of the act, since it was interpreted to mean, that if a workman deliberately and purposely injured or destroyed some portion of his body that he might obtain money, he was not entitled to receive compensation. Needless to say, such a deliberate act of destruction practically never occurs, and, were it to have occurred, it could not have been so proven.

At the present time the Michigan viewpoint is changing and we are entering a period wherein we may be able to do unlimited constructive work to the benefit of both employee and employer. This is ever our objective as industrial surgeons.

Industry should furnish every employee with a book of safety rules plainly setting forth, as far as possible, those things which the employer insists shall and shall not be done, for the benefit and protection of the employees. The employers' interests are only of secondary and minor consideration.

Quoting from a not too recent decision:

"Rules such as this are, I think, made more to save the lives and limbs of workmen than the pockets of employers; and, speaking entirely for myself, I may say that I think an ill-service is done to the working classes in permitting such rules to be disregarded, in that it slackens discipline, and encourages carelessness and rashness, from which they themselves are the greatest sufferers."

Such a book of safety rules is worthless unless rigidly enforced. Each foreman must be instructed to enforce them by discipline, or by layoff without pay, or by release, accordingly to the severity of the infraction. If the foreman fails in his duty, he in turn is the culprit subject to discipline. To accomplish anything at all, this discipline *must* be enforced.

Again quoting from an official decision: "The rule is laid down by the best authorities that breach of an expressed rule or order will be held to be serious or willful misconduct as a matter of fact, especially if such rule or order was made for the safety of the employee."

Once you have reached this stage of the practical administration of Section 2, of Part II, of the Michigan Compensation Act, you can begin to see untold benefits in the reduction of your avoidable accidents. Under the old interpretation no one other than the employer has any legal responsibility whatsoever. Under the present interpretation the employee becomes a partner in the carrying out of this section of the act. Under the old interpretation the employer was helpless and unable to reduce his accidents beyond a given point, since the workman soon learned that he had no legal responsibility and consequently he assumed only a portion of the responsibility he should assume.

The results, as shown by the experience of the Chevrolet Motor Company of Flint, after our attempt to induce the workmen to assume a reasonable share of responsibility, are worth careful consideration, so please follow these figures closely. A full time

worker averages about 250 hours per month, so we will reduce our working force to 250 hour workers so that no error may be registered. In reality our measure then becomes actual hours rather than number of men on the payroll. This becomes necessary since the number of men on our payroll is far too unstable and variable to render actual and accurate comparisons.

I will give comparative results for the six months just prior to, and six months just after this change went into effect. During this later period our amputation cases decreased 77 per cent and our compensation cases 61 per cent. This, however, is not a fair comparison, since there were more 250 hour workers in the first period than in the second period. If these comparisons are then weighed and made upon the basis of 100 per cent, using the 250 hour workers in the first six months' period as the basis of calculation, our results would have shown 68 per cent decrease in amputations, and 34 per cent decrease in compensation cases, had the same number worked exactly the same number of hours in each instance.

Year	250 Hour Workers	Compen- sation Cases	Ampu- tations
1929			
March	15,501	35	6
April	16,062	40	7
May	16,190	26	4
June	16,128	20	5
July	15,510	21	3
August	14,447	17	6
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	93,858	159	31
September	12,461	10	1
October	12,066	15	4
November	3,304	9	0
December	5,480	6	1
Year 1930			
January	10,922	11	0
February	11,411	11	1
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	55,684	62	7
	Decrease 41%	Decrease 61%	Decrease 77%

Comparing this experience with the figures for the corresponding periods of the year previous, and weighing in a corresponding manner, we find that in 1928 our amputations decreased 1 per cent, and our compensation cases 4 per cent. These later percentages represent the same periods one year before the previously given figures or

one year before we tried to enforce Section 2 of Part II.

There are but two other considerations which have any influence upon these results as far as I know. During this six months trial period we changed models—machinery was moved, new jobs were created, and all of the rest of the usual routine alterations, associated with the usual increase in accident risks. This should just about offset the influence of a decrease in the force with its associated decrease in "floaters," and careless workmen. These careless men invariably go first, whenever the force is decreased.

Just prior to the six months period under discussion two cases were taken up and won under "Intentional and Wilful Misconduct." Two men were deprived of compensation, but how about the 54 men that would have become compensation cases, and how about the 14 amputations that would have occurred, had our ratio for the previous six months been maintained?

This section is not a means of penalizing injured men. During this trial period we probably could easily have taken up at least fifteen such cases. Our objective is not to save money, but to save needless accidents. Any deviation from this viewpoint, I am thoroughly convinced, should be discouraged.

As a postscript to this section, and, as previously mentioned, there is nearly always such a postscript to any section of our compensation act, many of the best advised hold that if an employee deliberately disobeys an expressed and known rule, and is injured thereby, he is doing an act which is not a part of his work, and that such an accident consequently does not arise out of his employment. Such an act adds an element of risk forbidden by the employer. However this may be, it would seem to me that both viewpoints should be maintained in the hearing of any such case, though it makes no difference practically whether the legal interpretation shall be willful and intentional misconduct, or whether it shall be that the injury does not arise out of the employment.

To summarize this section, I thoroughly believe it is our duty as industrial surgeons to do the greatest good to the greatest number, as far as possible, under the law as written, and as interpreted by our courts. Of course, we will be criticized, but that

which is best for the employee is best for the employer. I had rather be criticized for keeping two men from receiving compensation, than to be told I solely was responsible for severe accidents to 54 other individuals, of which fifteen were amputations.

DISTAL PHALANGES

Section 10, Part II, reads as follows: "The loss of the first phalanx of the thumb, or of any finger, shall be considered to be equal to the loss of one-half of such thumb, or finger, and compensation shall be one-half of the amount above specified."

This section has also undergone several changes of interpretation. In the original instance loss of more than one-half of the distal phalanx of any finger or thumb was interpreted by the Department of Labor and Industry to be the loss of one-half of such finger or thumb. However, such a case was appealed to the Michigan Supreme Court by the Olds Motor Company. This court ruled that, "The statute nowhere provides for the loss of a part of a phalanx in its list of specified injuries and presumed disability arising therefrom." They directed that compensation should therefore be paid under disability—which would at this time mean $66\frac{2}{3}$ per cent of the average weekly wage, but not more than \$18.00 nor less than \$7.00 a week for the period of disability.

A recent ruling by the Department of Labor and Industry is to the effect that when a "substantial" section of the distal phalanx is amputated it shall constitute one-half the loss of such finger or thumb.

This leaves the matter still in dispute as to what constitutes a substantial portion and again whether the Supreme Court meant just what they said in their original ruling. An appeal will of course be made sooner or later by some one. In the meantime I believe these cases should be settled on the interpretation of one-half or more than one-half of the distal phalanx being a substantial portion and that settlement of these cases be made on the basis of one-half of the amount specified for the loss of such finger or thumb, as the case may be.

MINORS

If a minor between the ages of 16 and 18 is employed and is injured he is entitled to double compensation. By preference minors under 18 years of age should not be employed.

Until recently the employer was solely responsible for knowing whether the employee was or was not over 18 years of age. It has been customary to obtain birth certificates and working papers from the school authorities, to establish the exact age. I understand, however, that at the present time it has been held that, if a minor lies about his age, he is not entitled to double compensation, but must be content with the usual amount, since he would have obtained this extra money through fraud.

DELIA NEUDICK VS. FORD MOTOR COMPANY

In this recent case the Ford Motor Company ordered all new employees to be vaccinated as a pre-requisite to obtaining work. The vaccination was done by their own Medical Staff. The Detroit Board of Health requested that these vaccinations be done.

Louis Neudick was so vaccinated and died from general septicemia arising therefrom.

A very similar J. L. Hudson case is on record in which the Board of Health, through one of their own physicians, came to the J. L. Hudson store and did the vaccination.

In the first case the Ford Motor Company paid for a death claim while in the later case compensation was refused.

INJURIES ON THE WAY TO AND FROM WORK

An ever new and ever old question. Every month or so our newspapers publish an article about a workman that they allege received compensation because of an accident which was received on the way to or from work.

After reading the official reports of quite a number of these cases, I have rather lost interest, since all seem to be of the same general nature. A hypothetical case will probably furnish the best example: A High School boy earning his way through school works an hour or so after school delivering groceries for the owner of a small neighborhood store, and some hour and a half before school each day it is his duty to go to the barn of his employer, care for his horse, and then go to the store and sweep out. On the day in question, after caring for the horse, he was struck by an automobile on the public highway, while going from the barn to the store. The question is whether this is, or is not, a compensation case. There is but one answer and that is yes, since his work began at the barn and he was forced to go from the barn to the store as part of

his employment. The boy can take his choice, he can claim compensation from his employer, who would have no choice but to pay the same, or he may attack the third party, under common law, but he cannot do both. If the employer pays compensation, he in turn is perfectly free to recover at common law from the driver of the automobile.

This same principle is involved in nearly all of these cases. Often, however, the determining factor is whether the injured employee was still on company property or whether he had left the property of his employer before the injury occurred.

THE OPEN DOOR

As Floyd Gibbons says—here is one hot off the griddle. In fact it is now before the Supreme Court and no decision has, as yet, been rendered. We are therefore dealing with possibilities.

As a part of the duty of the Department of Labor it becomes incumbent upon them, as a part of the act, to pass upon and approve, or disapprove, each and every agreement between the employee and employer. No case can be handled without their sanction. The law, however, says nothing whatsoever about passing upon settlement receipts. The plain assumption is that the employer will to the best of his ability live up to his agreements and the experience of the board has shown this to be true in the great majority of all cases.

In the absence of fraud, and unless the employee can show that his physical condition has changed for the worse, such a case applying for additional compensation is now denied. However, there is a case now before our Supreme Court in which the con-

tention seems to be that it is, and has been, the duty of the Department of Labor and Industry to so watch each and every case that they can intelligently pass upon the settlement receipts of all of these cases and that unless this is done, or unless this has been done, a case can not, nor has not, been closed.

This means all cases will require a "petition to close" and a hearing in each and every instance, and that no case settled in the past 17½ years, or from the time the law became effective, is closed nor can it be closed without the sanction of the board, which would seem to mean a rehearing. Think of rehearing all of our old cases and also holding a new hearing on each and every new case. Think of having a hearing on a three dollar settlement which will cost the employer possibly \$100.00 or more to try, and which will increase the work of the Department of Labor and Industry more than ten times. Can you bring proof to show the present condition of a man injured 17 years ago, who is now employed in China or South America? What would be the reaction of your employer if this becomes law, and he was asked to put on a force of 20 or 30 people to handle the situation? Let us suppose that this hypothetical case died of pneumonia some seven years later, can you produce proof to show there was no connection, even though it were self evident? Here may be an open door for fraud to flounce through in gaudy attire and defiant mood. Let's hope this door is never opened.

And so this interesting story of the past, present, and possible future, of sections of the Michigan Compensation Act, could be continued quite indefinitely.

PSYCHIATRY IN INDUSTRY AND COMMERCE*

IRA M. ALTSHULER, M.D.†

DETROIT, MICHIGAN

Man is a bio-sociological being, the result of a prolonged process of biological and social adaptation. Primarily a biological entity, man is governed by universal, physical, and chemical laws as well as by instincts.

As a sociological entity, he is governed by laws and customs of the group-family, tribe, community. When man began to live in families and tribes he was forced to sacrifice some of his biological strivings in order to adapt himself to a complex social order.

If one attempts to investigate and study the modern man, it is necessary to utilize the sciences of biology, medicine, psychology, psychiatry, sociology. Nowhere else is a more detailed and careful study of man, his health, intelligence, character, emotions, special aptitudes, of such practical importance as it is in industry and commerce. Industry and commerce regards man, as far as his services are concerned, from a purely material angle. To them it is a commodity which has to be bought (just as material and machinery) for the purpose at hand.

Man himself is entangled in modern life, accustomed to his ways of thinking in a certain direction. He appraises himself, constantly being placed side by side with earthly values, in terms of goods, praises, honors, titles, salaries. The relationship of man to industry and commerce rests especially on the principle of buying and selling.

But when it comes to apply this principle to industry and commerce, we note that no definite standards have as yet been adapted for the purpose of correct and just hiring of employees.

Industry and commerce is a highly important center of humanity. It is a great laboratory where man is tested, appraised, rejected, or rewarded. Every day new individuals are storming the gates of this immense laboratory. Many of the individuals are quite young, with unformed habits, emotionally unripe; with little or no experience and economically dependent.

Anxious to start in life, they are ready to attack everything that presents itself; they are quite unaware of the harm of such an approach.

The situation is further complicated, if one recalls that many industries are largely unprepared to handle satisfactorily the large number of employees. They not only lack definite data of the jobs' requirements, but are hopelessly ignorant of the value and significance of the physical, intellectual, and moral qualifications of the employees. This creates more chaos.

The personnel director in charge of hiring of employees, no matter how intelligent he may be, is not in the position to substitute the service which should be taken care of by the physician, psychologist, psychiatrist, sociologist.

The revolutionary discoveries in chemistry and physics, the creation of new powers and resources of energy, the ramification of industry and commerce into various directions all call for people with special abilities. For the sake of the well-being of the individual and general progress it is essential that each man should be placed where he belongs. Each job, occupation, or profession requires specific qualities.

The problem then resolves itself into finding the right man for the right position. This task can be adequately met only by a group of competent people composed of physicians, psychologists, psychiatrists, sociologists.

Aside from economic advantages to the individual, and proper selection of employees to enterprise, placing the right man on the right job is a problem of immense importance to society.

Each misplaced man is not only an economic loss but may become a source of misery and danger to society. The feeling of being useful is the basis of our social order; no one can be happy and contented without possessing this feeling. The above feeling is strengthened by genuine abilities and aptitudes.

*Read before the Staff of Eloise Hospital, December 18, 1929.

†Dr. Ira M. Altshuler was graduated from the Medical School at the University of Bern, Switzerland, and spent two terms post-graduate work in neuro-psychiatry at Harvard Medical School. He is Chief of Staff of the Institute of Vocational Counsellors, Psychiatrist of Eloise and Children's Hospitals, and Neurologist at Grace Hospital. He has written numerous medical articles for American and European journals. Dr. Altshuler has a speaking and reading facility of Russian, German and French and has become quite proficient in English since locating in Detroit.

A person who is forced to leave his job because of inability to perform it is offended. He easily gets the impression that he is useless, hopeless. This leads to depression. Subsequent attempts and failures are often fatal to the individual. He may end either as a criminal, public charge, or end his own life—each selecting his own route conforming to his constitutional peculiarities.

It is a direct duty of society to work out and arrange ways and means for vocational guidance. People should not be forced to work at something which is above or below their physical or intellectual possibilities. Jobs, the performance of which requires superior intelligence, can not be accomplished, of course, by persons of low I. Q. On the other hand an intelligent person placed on an automatic and monotonous job, will not perform proficiently because of lack of interest and incentive.

Industry and commerce is serving mankind. It should also be interested to serve well and usefully. However, it cannot serve without scientific selection and guidance of the personnel.

A chance should be given to each individual to work at the job for which he is best fitted. We must guide and help him to develop and grow. Only under such circumstances may one expect returns in the sense of good to society.

I believe that only science is in the position to elevate industry and commerce to a more stable and useful state, and this through improvement and progress in personal research.

It is rather curious that in the classical estimation of machine, material, and man, the last and most important of these three is the least known and studied. One of the reasons why industry and commerce has neglected to study the human element is perhaps because of unpreparedness to do so scientifically. Until a few years ago, psychology and psychiatry had not been able to offer their assistance and coöperation. The medical man, the psychologist and psychiatrist, were not close enough to industry and commerce to understand and know the latter's problems, needs and demands.

In the last fifteen to twenty years much work has been done in biological, medical, and sociological sciences which industry and commerce can use to their advantage. The development of biology (constitution, inheritance), medicine, psychology, and sociology

has enabled us to study the character, intellect, and behavior of men more accurately. It enables us to predict his physical, intellectual, and emotional fitness for a given job—a prognosis of great economic value! The study of man went so far that we are already able, as Professor L. Barker puts it, to record: "Psycho-biograms of the bodily type, the temperament type, and the social adjustment type of single persons that are immensely helpful in the work of the practicing physician, of vocational advisors, of differential psychologists, of psychiatrists, and criminologists."

Medico-psychiatric service and the administration of psychometric tests thus became a regular routine in schools, colleges and many progressive industrial enterprises. The scope of this work is constantly being widened and improved. The problem at the present time is centered upon the fact that quite often mental tests are administered by untrained persons. This discredits the value of the test.

Henry B. Elkind, Medical Director of the Massachusetts Society for Mental Hygiene, rightly states that "to meet the demand of industrialists for a cheap and efficient test, one which could be given by the average clerk, certainly merits severe criticism. To my mind, this desire accounts in large part for many failures that have come about in the use of intelligence tests in industry. It is now becoming apparent to psychologists that the value of psychological tests decreases directly as the person who administers the test lacks special psychologic training. A psychologic test stands always in need of interpretation, and interpretation always depends on a large experience in the construction and in the administering of tests, as well as on a considerable grounding in theory."

But aside from giving a scientific test, the employee's health, mode of living, and interest should be studied. One must not deal with a part of a human being. The promotion of the employee's health and happiness will help to improve his activities and produce greater efficiency. Cognizance should also be taken of various personality traits, disorders, peculiarities which the individual may harbor. These things can be adjusted. A tactful approach from a competent source may do much in the re-education of the individual. All this, of course, requires thorough knowledge of the bio-

sociological factors of man as well as painstaking investigation of his life and behavior. Dr. V. V. Anderson, the psychiatrist of Macy & Company, a department store of New York, correctly states: "Certainly the need of a psychiatrist in every well organized medical department and business establishment, employing several thousand workers, is becoming increasingly evident to those who have given serious consideration and thought to the problem created by chronic hospital users, fatigue cases, sick leave, and numerous other patients whose outstanding difficulties are personality disturbances, and where the practical results from medical and surgical treatment are anything but flattering to the medical profession."

Nowhere has the truth echoed more strikingly than in the following opinion of A. Scott: "The duty of the industrial psychiatrist is to see that the people are placed properly at their work, helped to develop interest and outlets for their energies outside of work, and restrained from developing difficulties due to discrepancies between their ambitions and their capacity for achievement."

I believe that a routine use of psychological and psychiatric service in industry and commerce will mark a great advance

not only in those respective fields, but will also be of great benefit to humanity at large. The maintenance of social peace and happiness, complete success of our nation, depends a great deal upon vocational guidance, and scientific placement; this should be made a regular life curriculum. It is painful to see the most precious resource—Man Power—turn into waste through ignorance, misuse and neglect. A stop to this intellectual massacre must be made at once! There are no happier men than those who fit their jobs, and there is no success without contentment. To quote Professor Barker again: "The physician of today should strive not only to cure and to prevent responsive inadequacy, but also to arrange whenever possible for an abounding vitality and for bringing to realization as many as he can of the desirable physical, intellectual, and moral potentialities that may be lying latent in a phenotype."

The time is ripe for the industrial psychiatrist to develop into a social therapist. Acquainted with the details of the physical, intellectual, moral status as well as with the potentialities of the individual, he is in a position to direct the person more wisely and intelligently.

567 Fisher Building.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M.D., Commissioner
LANSING, MICHIGAN

MACOMB COUNTY DIPHTHERIA PROTECTION PROGRAM

Macomb County has completed its second county-wide diphtheria immunization program, carried on under the supervision of the Macomb County Medical Society. Organization and educational work throughout the county was done by Mabel Hinds, county nurse, while the Mt. Clemens schedule was arranged by Carrie Webster, school nurse of Mt. Clemens. Both nurses assisted in the clinical work. Melita Hutzel, lecturer from the Michigan Department of Health, aided in the preliminary educational work in both county and city.

Toxin-antitoxin was administered entirely by local physicians, working in their respective communities, with the schools as

clinic centers. In general, the plan was followed of designating a centrally located school as a clinic, and inviting surrounding one and two room schools in to this central point. At the request of the County Medical Society, the Schick test was given in both county and city schools by a doctor from the Michigan Department of Health.

A fee of twenty-five cents for each treatment was decided upon by the Medical Society at the time of the first campaign, and the same amount was charged in the second. Each teacher was asked to have ready a list of the children who were unable to pay, and in every case the treatments were given by the physician without charge. There was, of course, no charge for the Schick test.

The organization work preceding the clinics was carried on on a township basis,

each township being systematically canvassed. Miss Hutzel spent six weeks in the county working with Miss Hinds and Miss Webster, interviewing key people and speaking before various groups. Thirteen townships were included in this educational campaign: Armada, Bruce, Chesterfield, Clinton, Harrison, Lenox, Macomb, Ray, Richmond, Shelby, Stirling, Warren, and Washington.

Individuals interviewed included superintendents of schools, grade principals, school directors, physicians, ministers and priests, club presidents, and city and village officials concerned with the campaign. Groups addressed included practically every available organization, parent-teacher associations, luncheon clubs, community groups, farmers' clubs, church Aid societies, church congregations, and high school assemblies, village and city grade schools, and rural schools, both public and parochial. In all, Miss Hutzel talked to 6,319 persons in Macomb County in the six weeks that she spent there.

In the talks before lay groups the usual points were stressed—procedure of immunization, the difference between prevention of diphtheria and cure, and the importance of completing the three toxin-antitoxin treatments with a Schick test. In every case the importance of immunizing preschool children was emphasized, and parents were urged to bring them to the clinics. In only two or three communities was any opposition encountered, and in those cases it was instigated by adherents of the Medical Liberty League.

The complete record of numbers immunized throughout Macomb County is not yet available, but already several schools have reported 100 per cent protection. This is especially praiseworthy in a clinic program carried on entirely on an individual payment basis.

NEW TRAINING COURSE STARTS

The third session of the Training Station for health officers and public health nurses interested in county health work started May 15 at the offices of the Michigan Department of Health. The course will continue until August 14.

Class work covers the topics of public health organization and administration, sanitary engineering, epidemiology, laboratory procedure, child hygiene and public health nursing, industrial hygiene, mouth

hygiene, vital statistics, and health education. Supervised field work follows the class instruction.

ACTIVITIES IN CHILD HYGIENE AND PUBLIC HEALTH NURSING

The prenatal nursing program in Clinton County has ended, and Sylvia Krejci, R.N., who has been carrying it on, has gone to Mason County, where she will do demonstration infant welfare work.

A breast feeding survey is being made in Luce County by Julia Clock, R.N.

Livingston County's series of child care classes taught by Nelle Lemmer, R.N., has been finished, and Miss Lemmer has gone to Kalamazoo County, where she will put on a prenatal nursing demonstration.

Charlotte Ludington, R. N., and Esther Nash, R.N., are now assisting in organization for diphtheria prevention in St. Clair County. The immunization program there is being sponsored by the County Medical Society.

SCARLET FEVER PATENT INFRINGEMENT SUIT

The Infringement Suit of the scarlet fever patents is being heard in Federal Court Number 3, Woolworth Building, New York. Dr. George Dick and Dr. Gladys Dick, representing the Scarlet Fever Commission, Inc., sued the Lederle Antitoxin Laboratories for infringement of seven of the ten claims which were allowed in the scarlet fever patents.

Lederle Antitoxin Laboratories, the defendants, claimed no infringement and that the patents were invalid because no discovery was made and the entire work of the Dicks was developed by "prior art." Testimony is being introduced which dates back to the work of the Russians and the Russian Poles and Austrians early in the twentieth century. The work of Dochez at Columbia University in 1923 is being drawn upon in an attempt to prove "prior art."

The plaintiff introduced testimony showing that the cause of scarlet fever was not known in 1922 and that the existence of a toxin was denied. Consequently their announcement of the production of experimental scarlet fever and the demonstration of the toxin was a definite discovery.

The case will probably not be finished before the first of May. The Michigan Department of Health is vitally interested in this case, since the Department is manufac-

turing scarlet fever products for the prevention and treatment of scarlet fever under a license granted by the Scarlet Fever Commission, Inc.

C. C. Y.

INDUSTRIAL HYGIENE NOTES

An interesting current development in industrial hygiene in the state is the plan being formulated by industries in three cities for joint health service.

In each city, two or more of the smaller industries that do not feel justified in maintaining full-time medical service are contemplating combining their resources. The industries are so located geographically that this would be possible. By sharing the expense the industries could maintain an efficient health department under a competent physician, located at some convenient place that would serve the contributing organizations.

It is felt that this plan of combined health service offers many possibilities as a solution of the problem of adequate health supervision for the smaller industry.

THE 1930 HIGHWAY WATER SURVEY

Michigan's highway drinking water protection program began its sixth year on May 15, when representatives from the Bureau of Engineering left Lansing on the summer tour of collecting water samples.

The same general plan of procedure will be followed as in preceding years. Samples will be taken from any roadside drinking water supplies that might attract passing motorists, these samples will be sent to the Department laboratories for analysis, and the supplies found to be safe will be marked with a metal approval sign. Warning against unsafe supplies has not been attempted since the first year, when it proved signally unsuccessful.

Since it is not possible to put up the signs for individual sources before the middle of

the summer, it was thought best last year to change the wording. Consequently last summer's signs stated that the supplies were approved for 1929-30. This year they will read 1930-31.

The caution signs will be changed this year, since the metal parts have become so badly weathered that they are hardly readable. A new design has been worked out omitting the word "caution." This is in line with the policy of the State Highway Department to discourage the use of signs that might be construed as relating to driving. The new plate carries larger and more readable lettering.

A comparison of the results of the water protection program for the five years that it has been in operation shows the increasing scope of the work and the growing percentage of safe supplies:

Year	Miles Covered	Sources Tested	Number Safe	Per Cent Safe
1925	1787	427	272	63.7
1926	5479	805	619	76.3
1927	7190 (?)	1196	1000	83.6
1928	6435	1380	1159	84.0
1929	7797	1874	1583	84.5

The scope of the program was enlarged last year to include some of the main county roads in addition to the trunk line highways. Nine hundred and twenty miles of county roads were covered on which 108 samples were collected, meaning that for every sample tested 8.5 miles were traversed. Most of the samples proved to be from small villages and from school wells. This summer only the heavily traveled county roads will be included and the village and school supplies will be handled in another way.

Traditional belief in the purity of spring water has never been upheld by the findings of the surveys. In 1929, of the 39 springs tested, one-third were found unsafe. Tubular wells led in safety, with 1,512 approved out of 1,741. Of 85 dug wells, less than half were found safe.

TRUTH ABOUT MEDICINE

NEW AND NON-OFFICIAL REMEDIES

The following have been accepted by the Council of Pharmacy and Chemistry of the American Medical Association:

Mead Johnson & Co.—Mead's Dextri-Maltose with Vitamin B.

Parke, Davis & Co.—Ampules of Pitocin 0.5 c.c. Tablets Tutocain No. 6.—Each tablet contains tutocain (New and Nonofficial Remedies, 1929, p. 51) 0.05 Gm. Winthrop Chemical Co., Inc., New York.

Ampoules of Pitocin 0.5 c.c. Each ampule contains more than 0.5 c.c. of pitocin solution (Jour. A. M. A., July 13, 1929, p. 117). Parke, Davis & Co., Detroit.

Merthiolate Jelly 1:2,000.—It contains merthiolate (Jour. A. M. A., December 7, 1929, p. 1809) 0.05 per cent, eucalyptol 0.016 per cent, eugenol 0.016 per cent in a water-soluble base. Eli Lilly & Co., Indianapolis.

Merthiolate Ointment 1:1,000.—It contains merthiolate (Jour. A. M. A., December 7, 1929, p. 1809) 0.1 per cent in a petrolatum base. Eli Lilly & Co., Indianapolis. (Jour. A. M. A., April 19, 1930, p. 1237.)

POSTINFLUENZAL ANGINA PECTORIS

Of 412 patients with acute influenzal infection reported on by Albert S. Hyman, New York, nine developed angina pectoris, although they had never had symptoms of this disease before. He found that all the patients were in the middle age period. Electrocardiographic studies showed the presence of severe myocardial injury in most of these cases. Three patients died, two with extensive myocardial injury, but the third had apparently a good cardiovascular system. There was no relation between the severity of the original influenzal attack and the time of the onset of the first anginal seizure, nor was there any relation between the time of the seizure and the immediate outcome. He concludes that postinfluenzal angina pectoris must be considered as a not uncommon sequela in the convalescence from influenzal infections occurring in the middle aged.—Journal A. M. A.

ARTERIAL EMBOLISM AND EMBOLECTOMY

In six cases of arterial embolism of the extremities reported on by Jacob Lerman, F. R. Miller and C. C. Lund, Boston, the embolus was located in the axillary artery in one case, in the brachial artery at the profunda branch in one, at the bifurcation of the brachial artery in one, in the femoral artery at the profunda branch in two in one of which both femoral arteries were obstructed, and at the bifurcation of the aorta in one. In four cases cardiovascular disease was the underlying cause of the thrombus and in one an aneurysm of the subclavian artery; in one the cause was not definitely established. The result from embolectomy in two cases was good so far as the circulation of the affected extremity was concerned. One of these patients, however, died thirteen weeks after operation as a result of myocardial disease. The other three patients operated on died from one to five days after embolectomy, in spite of postoperative improvement in the circulation of the extremities involved. They conclude from their observations that the success of embolectomy depends on various factors, particularly on the time elapsing from the onset of

symptoms to operation and on the location of the embolus. Narcotics may mask the symptoms in embolism of the extremities, thus jeopardizing the chances for early operative treatment. The embolus is often palpable as a thickened lump and usually pulsates vigorously, the pulsation being transmitted down the occluded artery for a short distance. The irrigation of an occluded artery with salt solution after the removal of the embolus may be useful in reestablishing the circulation of an extremity.

—Journal A. M. A.

REPORT OF PROGRESS ON USE OF EPHEDRINE IN CASE OF MYASTHENIA GRAVIS

Harriett Edgeworth, Tucson, Arizona, relates her own experiences as the subject of therapeutic experiments made to give relief from the symptoms of myasthenia gravis. Quite by accident she discovered that relief followed the taking of ephedrine. In the past three months she has been taking 6/8 grain daily except for a few days. She is now able to walk the distance of several rooms, to get into and out of a car with a small amount of help, and to speak and chew without difficulty. She can raise her arms to her head for a few minutes, write a short letter, and read the morning newspaper without diplopia appearing. The pulse quality has improved, and she is much less conscious of a shortness of breath. The cyanotic symptoms have almost disappeared. The possibility of the improvement being due to any psychic effect would seem to be ruled out by the fact that experiments were conducted without her knowledge of it. The apparent favorable influence of ephedrine in this case of myasthenia gravis may be due to the stimulating action of this drug on the central nervous system, but only time will tell whether its use is therapeutically wise.—Journal A. M. A.

RESPONSIBILITIES OF MEDICAL PROFESSION IN HEALTH PROGRAM OF PUBLIC SCHOOLS

Fred Moore, Des Moines, asserts that in the development of the relation between the school and the medical profession, certain principles in accordance with present-day social standards have been observed: (1) that the function of the school is educational, and (2) that adequate compensation should be paid for medical service. Advice of mere medical origin is not sufficient. It should come from those who understand the medical problems of childhood, child psychology, something of physical education, and the possibilities of school adjustment. The medical profession can and should make a valuable contribution of it.—Journal A. M. A.

ALLERGIC INSULIN REACTIONS

Insulin is a protein-bearing compound used daily by thousands of patients throughout the world. It is administered in a manner that lends itself most readily to the production of allergic reactions. Many diabetic patients exhibit evidence of hypersensitivity to insulin in local skin reactions which are seldom of serious importance and may easily be corrected by the oral use of calcium lactate. More serious allergic reactions involving other parts of the body occasionally occur which are not recognized as such. John R. Williams, Rochester, N. Y., reports an almost fatal reaction involving the gastro-intestinal tract. He suggests that those charged with the responsibility of treating diabetic patients bear this phenomenon in mind and that patients be accordingly instructed, and also that manufacturers of insulin mark on their packages the animal source of their product.—Journal A. M. A.

WILLIAM JOHN KAY, M.D., F.A.C.P.

By H. E. RANDALL, M.D.

FLINT, MICHIGAN

William J. Kay, Superintendent of the Michigan Home and Training School and a former president of the Michigan State Medical Society, died at Lapeer, Michigan, shortly after midnight on the morning of April 16, 1930, age 63 years. The cause of death was septic sore throat of five days' duration.

Dr. Kay descended from a line of doctors. His father, his grandfather and great grandfather were all practitioners of medicine. His father, John Patterson Kay, was a citizen of the United States and a surgeon in the Northern Army during the Civil War, but the son, William J. Kay, was born in Belmore, Ontario. He attended High School at Harrison, Ontario, and a German Academy where he studied languages. In his younger days he was a cabinet maker and was employed in a pipe organ factory at Clinton, Ontario. It was here that he met his wife, the daughter of the proprietor, who survives him, and this year would have celebrated the forty years of his marriage. In Detroit he was employed in the organ factory of Votey and Co. By the apprentice system he served in drug stores and obtained his first and second papers as a registered pharmacist. It was as a pharmacist that he was employed in a drug store in the thumb country and in Detroit during his student days in medicine.

Graduating from the Detroit College of Medicine in 1897, Dr. Kay located at Attica, Michigan, a former lumber town. His ability and skill as a physician spread rapidly and his office was the center of many miles of practice in the days when the practice of country physicians entailed the hardships which have now passed. His kindness and gentleness combined in a personality which inspired and won lasting confidence. No man ever practiced medicine who had higher ideals of the privilege and duty of serving suffering humanity. His ideal was Doctor Weelum MacClure of "Beside the Bonnie Briar Bush." No days were too long, no nights too dark or cold, no roads too bad for him to answer the calls of his countrymen. The poor and the unfortunate in the struggle of life ever won his sympathy and solicitude. He never gave a

thought to his own personal health or convenience.

After five years of country practice he moved his family, which now consisted of a wife and two girls, to Lapeer to enter a partnership with Dr. H. E. Randall which lasted eight years, until the latter moved to Flint. Dr. Kay's practice at Lapeer was one of the largest in the state. His counsel



Dr. William J. Kay

and his judgment were sought in all serious cases in the county. His medical confrères sought his services for his analytical mind and for his sound judgment and advice. His own diversions have been good literature and music. He was a constant attendant at county, state and national meetings and took a keen delight in meeting old and new friends. His comment was that he never attended a medical meeting without deriving something from it. He followed medical literature closely and never lost that progressive spirit even when as Superintendent of the Michigan Home and Training School his duties were largely administrative and educational. The successful prophylaxis of scarlet fever by Drs.

Dick and Dick was first done under his supervision at Lapeer. Dr. Kay excelled in the handling of nervous patients, a bugbear to many physicians who are not possessed of that equanimity recommended by Osler. "What is patience but an equanimity which enables you to rise superior to the trials of life?" Dr. Kay's patience, his unending good nature and his understanding of human nature and his knowledge of the trials and fears of the neurotic made him a master of psychic treatment in these unfortunates. He was never in such a hurry but that he would hear their story and put in the encouraging word of cheer.

His interest in education is evidenced by sixteen years of service on the school board of Lapeer. He also served on the State Board of Michigan Eastern Hospital at Pontiac, before the state board was combined into one board. The problems of the feeble-minded incited his sympathy and interest. After a severe illness with gallstones and jaundice and after an operation by Dr. Angus MacLean he decided that the irregular hours of the practicing physician were beyond his physical powers. He accepted an appointment as superintendent of the Michigan Home and Training School from Governor Grosbeck for the vacancy created when Dr. Harley Haines accepted the Superintendency of the University of Michigan Hospital. Dr. Kay as Superintendent of the Michigan Home extended the parole system. The girls are placed in homes to do housework and the boys are usually placed on the farm. As a feeble-minded is placed in an institution for life, an attempt is made to effect a social adjustment. When it is considered that the capacity of the institution is 2,800, with a waiting list of 800, the need of some of these patients becoming self-supporting is apparent. He urged the public to help carry out this plan to care for some unfortunates. The state is about to add seventeen more cottages to the Lapeer Home to care for an increasing waiting list.

Dr. Kay was honored by his medical associates by being elected President of the Lapeer County Medical Society, which he helped to organize with Hugh MacCall as first President. He was Councillor of the State Medical Society and after serving several terms as chairman of the Council, was elected President of the Michigan State

Medical Society at its Annual meeting held in Bay City. He was a member of the American College of Physicians and the American Medical Association and an active member of the National Mental Associations. He had served six years as Superintendent of the Michigan Home and Training School at the time of his death.

The attendance at his funeral was the largest ever held in Lapeer and hundreds of his friends, physicians and patients passed his casket as it lay in state in the Presbyterian Church, banked with floral gifts to mutely express the appreciation of his life and the great loss which the profession and the public have sustained in his passing. In his immediate family he leaves a wife, Carrie Kay; a daughter, Elaine Kay; a sister, Mrs. Louis C. Cramton of Washington; a brother, Fred Kay, postmaster at Lapeer; and a brother, George Kay, a chemist of Baltimore; and two grandchildren, left motherless when Bernice Kay White, older daughter of Dr. Kay, died eight years ago.

As Osler says of Palmer Howard, "It is no exaggeration to say that to have known him was in the deepest and truest sense of the phrase a liberal education." To have known Dr. Kay was an education in ethics, of sound practical medical care, of a sustaining philosophy of life, of rectitude, friendship, honesty and service.

Resolutions on Death of Dr. William J. Kay

Resolved by the Genesee County Medical Society that in the death of Dr. William J. Kay, an associate member of this society and a former president of the Michigan State Medical Society, that we have lost a true and loyal friend of the medical profession. His efforts for medical organization, his years of unselfish devotion to his patients and a personality combining unusual qualities of mind and heart, have endeared him to the membership of this society. Be it resolved that we extend to his bereaved family our sincere sympathy at his passing; that these resolutions be spread on the minutes of our proceedings and that a copy be sent to the Journal of the Michigan State Medical Society for publication.

THE JOURNAL

OF THE

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JUNE, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

THE PASSING OF TWO PAST PRESIDENTS

Since the April number of this Journal had gone to press, the deaths occurred of two past presidents of the Michigan State Medical Society. Their passing is a distinct loss to the profession, inasmuch as each was at the zenith of his professional activity. Dr. W. J. Kay had performed so successful a role as head of the Institute at Lapeer that his position will be difficult to fill. Dr. Kiefer was loved by all whose good fortune it was to know him. Both men represented the highest type of manhood. Had either entered any other calling than medicine, he would have been an ornament to his profession. Both were men of mature and

well-seasoned judgment and, in the best sense of the term, men of broad outlook and culture. They were fearless in the cause of humanity. Kipling can do greater justice to the memory of these two men than any panegyric of ours, so with slight alterations of Kipling's poem, let it be said,

"They scarce had need to doff their pride or slough
 the dross of Earth—
 E'en as they trod that day to God so walked they
 from their birth,
 In simpleness and gentleness and honor and clean
 mirth.

So cup to lip in fellowship they gave them welcome
 high
 And made their place at the banquet board—the
 strong men ranged thereby,
 Who had done their work and held their peace and
 had no fear to die.

Beyond the loom of the last lone star, through open
 darkness hurled,
 Farther than rebel comet dared or hiving star
 swarm swirled,
 Sit they with those that praise our God for that they
 served His world."

ROOM AT THE TOP DIMINISHING

There is an old saying that there is plenty of room at the top, interpreted to mean that the man or woman with the highest qualifications is always sure of employment. A few months ago there appeared a book entitled *The Twilight of the American Mind* in which the author endeavored to show that some phases of industry as big business management which had taken over the smaller industries and had centralized business management had eliminated a great many high grade competent men. This is illustrated by the chain store movement as well as by large bank mergers.

Nor is this all. We find the same process of elimination of the eminently fit in industry. The invention of complex machinery has eliminated a great many high grade mechanics and other skilled workers with an increase in unemployment which may be attributed to technological changes in industry. A recent investigation before the committee on education and labor of the United States Senate into the causes of unemployment reveals the fact that "7 men now do the work which formerly required 60 to perform in casting pig iron; 2 men now do the work which formerly required 128 to perform in loading pig iron; 1 man replaces 42 in operating open-hearth furnaces. A brick-making machine in Chicago makes 40,000 bricks per hour. It formerly took one man eight hours to make

450. The most up-to-date bottle-making machine makes in one hour what 41 workers used to make by hand in the manufacture of four-ounce prescription bottles."

Thousands of skilled musicians have been thrown out of employment with the invention of the talking movie. Bookkeeping machines, counting machines and other office devices have given office employees the choice of unemployment or a position at a much lower wage operating one of the new machines. Bookkeepers in banks earned from \$150.00 to \$200.00 a month. The new bookkeeping machine is able to accomplish more work and probably with greater accuracy by a person earning from \$100.00 to \$125.00 a month. It has been estimated that during the past three or four years from 150,000 to 170,000 persons with more or less skilled technical training have been relieved of their positions each year solely due to the fact that new inventions of various kinds have supplanted their work.

According to the Russell Sage Foundation unemployment in the United States any one year runs from 1,000,000 to 6,000,000, depending upon prevailing industrial conditions.

There has been a lot said about socialism and in many places a certain approbrium attaches to the term. Socialism has been looked upon as a gesture on the part of the unsuccessful in life for that which they have been unable to acquire by their own honest effort. We have, however, come to a position in which a remedy for conditions as we find them must be sought, socialism or no socialism. In order to avoid misunderstanding the opposite to socialism is the doctrine of *laissez faire* which means absolute freedom, or unrestraint in the matter of working or of conducting one's business. Anyone who has observed the trend of industry will realize that at least to the extent of our workingmen's compensation laws the principle of *laissez faire* no longer holds. Large employers of labor, however, have been prone to feel it entirely their own business to attract workers to the city, give them work for a certain length of time and dismiss them without warning when they were no longer needed, thereby throwing them on to the municipality for sustenance, to be maintained by public taxation in which the public rights in the matter were entirely disregarded. The time is coming when big business must take a different view of its

responsibility. The laborer in the broadest sense is a co-partner with capital in the matter of production. Without labor capital can accomplish nothing; without capital labor can do nothing. Each should consider the interest of the other, which interest must not be antagonistic in any sense to the general public good.

The American Federation of Labor as seen from the outside has not done much in the way of solving the problem. The solution is not a matter of shortening the working day and assuring as big a wage as possible.

Senator Couzens, who a decade ago was mayor of Detroit, has had considerable experience in municipal government. He is inclined to attribute unemployment to the shortsightedness of employers. In other words it is a preventable condition:

"This employment situation that enters into this winter's depression is your fault; no one's but yours," writes Senator Couzens. "You could have prevented it. You could have refrained from your high pressure salesmanship; your forcing luxuries upon people who are unable to buy them, which you in your sane moments know they can never pay for. But you will say that a man ought to know enough not to buy these things. You will say that people must protect themselves. You will say that you cannot help it if a man is foolish enough to buy beyond his means to pay. But I submit, gentlemen, that you are the ones who have forced upon them these articles of luxury which people cannot afford. You, through your high pressure salesmanship and your ambition and desire to keep up production to the sky, have forced upon millions of people in this country articles which they can never pay for."

The remedy suggested by Senator Couzens is the stabilization of income that must be accomplished by business which if not undertaken will be accomplished by the government by unemployment, old age insurance and any other form of insurance that may be found necessary for the preservation of human life.

As a class no one is more concerned in the solution of the problem of unemployment than ourselves, since on no other class does the burden of the care of the indigent sick fall more directly than on the medical profession.

ENGLISH CORDIALITY

The Manchester Guardian comments on a case in an English court in which judgment was rendered the plaintiff who had sustained injuries from an amicable slap on the back. This is rather surprising inasmuch as we had never found the Englishman particularly demonstrable in his affec-

tions. According to the said court the slap on the back was viewed as "an actionable trespass and a blow quite outside the ordinary common usages of social intercourse." There were a number of medical witnesses who testified that injured nerve tissues had resulted from the blow, and thus the court awarded the plaintiff not only the doctor's fees but also damages for his pain and suffering. The Manchester Guardian comments rather interestingly as follows: "It seems a melancholy result from what was intended as a friendly gesture, but one would like to think that the over-enthusiastic army of back-slappers and rib-pokers will take due note of the risks that are attached to their affable assaults. They are themselves usually large lumps of human material and well padded; poking and slapping as a form of emphasis or pleasantry is often a symptom of the complaint that has been well described as 'heartly degeneration of the fat.'"

SCIENCE SERVICE

The Journal of the Michigan State Medical Society has made frequent use of material furnished by Science Service. Our object is to provide our readers with as much authoritative and diversified reading matter as possible. Early in the year and in December, 1929, there occurred two national conventions of medical men, one the Radiological Society of North America at Toronto and the annual convention of the American College of Physicians in Minneapolis. The papers read at these gatherings were abstracted and thus available to our readers in many instances long before they appear in the special Journals of each society. This is only one instance. Many others will appear to those who follow this service closely as rendered in this Journal. Many of the articles appearing concern subjects ancillary to medicine; some have a cultural value only.

Among the publications using Science Service may be mentioned Science, Scientific American, Scientific Monthly, American Journal of Pharmacy, Journal of Chemical Education, National Board of Medical Examiners and the New York Times. All these publications have a reputation for accuracy and the high grade character of their reading matter.

The abstracts of papers appearing in the Journal of the American Medical Associa-

tion give in condensed form the substance of the papers published in the National Journal. It is virtually impossible to peruse the vast amount of medical writing that appears in the medical press today. Yet even the specialist who must have a thorough working knowledge of the literature of his specialty, must needs have some knowledge of the whole field of medicine and surgery. Perhaps there is no better way of keeping abreast of the times than to depend to a greater or less extent upon abstracts that appear in our Journals.

THE POOR MAN'S LAWYER—AND HIS DOCTOR

"Just a Minute" is a little folder published at intervals by the Detroit Bureau of Governmental Research. It deals with a variety of subjects. A recent number gave facts and figures concerning the poor man's lawyer, particularly in Detroit or Wayne County. It begins by declaring that the right of persons accused of crime to be represented by counsel is guaranteed by the constitution of the United States, and by all but two of the component states of the Union. But what does such guarantee amount to if the person so accused is financially unable to employ a lawyer in his defense? We are told that because the time of experienced attorneys is valuable, judges hesitate to ask them to perform free service as experienced physicians are expected to perform for the indigent. So lawyers are selected to defend those charged with crime and are paid a fee by the state ranging up to 1927 to a maximum of \$250 for a murder trial and \$100 for other cases. In 1927 the legislature changed the statute to do away with any set maximum. In 1929 the sum of \$113,672.69 was paid in fees to assigned attorneys in the Recorder's court in Detroit, which was over double the amount paid in 1925. In 1929 the number of defendants was 1,321 and the average fee paid the lawyer who defended each one was \$86.05. According to one of the Detroit judges, nine-tenths of the prisoners in the county jail asked that lawyers be assigned to defend them.

It seems that the law looks upon privation of a prisoner's freedom as of much more serious moment than an attack of appendicitis or a case of pneumonia, in which case the doctor called in would be expected to render service gratis.

A LIFE OF SERVICE TO HUMANITY

The influence of any man for good or for evil is a most difficult thing to estimate. When it comes, however, to a great national figure, whether a statesman or a great inventor or a man who has spent his life in pure scientific research, the influence on his generation is entirely beyond the power of anyone to evaluate. Probably no one calling carries with it the power of wide influence to a greater degree than that of teacher in some capacity. Dr. William H. Welch, whose eightieth birthday was celebrated on the eighth of April, lived a life of more or less cloistered seclusion as compared with the statesmen of the nation. His time has been spent in laboratories extending the bounds of human knowledge and in interpreting that knowledge to others. Not only this, his life has been an inspiration and he has been an opener of doors to thousands of the finest minds in the medical profession. We have a large number of them in Michigan, physicians who are in every sense a credit to their old Alma Mater, Johns Hopkins University.

Commemorating the event above mentioned the New York Times of that date contains the following editorial which appears to us such a beautiful tribute that we give it in full:

"What the Grecians called 'apotheosis,' said Bacon, was 'the supreme honor which man could attribute to man.' In that definition of the word, the supreme attribution of honor to Dr. William H. Welch today becomes his apotheosis. The nation pauses to give him its highest praise while he still lives. Another great physician, Sir Thomas Browne, in his 'Religio Medici' said that he cared for not so much as the bare memory of his name to be found anywhere after his death save 'in the universal register of God.' But fame pays little attention to the prayers of those whom she delights to honor. It is he among teachers who has overcome that 'last infirmity'—the desire to be remembered—that is most likely to be chosen. Dr. Welch has gone his way doing what his kindly genius has suggested without other prompting than the appeal of the thing that needed to be discovered or done for humanity.

"He has been called 'a first citizen of the scientific world.' He has three major achievements to give substance to the distinction that will outlive the personality which has made him both loved and admired. He organized the faculty of the Johns Hopkins Medical School nearly fifty years ago and the Johns Hopkins School of Hygiene and Public Health fifteen years ago. Then with an undaunted spirit which discredits the general theory of his associate, Dr. Osler, he began when he was almost twice forty years old to develop the history of medicine as a new discipline in the training of physicians, with a library as his laboratory. The fourscore years have not abated his 'eternizing passion' in the warfare against the enemies of man's bodily health and social welfare.

"The substance of his achievement has been illuminated by an old-time spirit of scholarship and graced by an art which is the 'happy science of the soul.' Like the one who is mentioned by Theocritus in his tribute to Æsculapius, the father of medicine, Dr. Welch 'put all his art into the work.' That is his special distinction. He is both scientist and artist in the highest meanings of both words.

"Hippocrates found life short and the art of healing long. Fortunately the life of this great modern physician who took early the Hippocratic oath has been lengthened to make more serviceable to his fellow-beings the art of healing in both its preventive and its curative ministries. There is nothing left to wish him but still more years in the practice of this art before he 'goes to the stars.'"

QUEER REASONING

In a book review published in the April 1st number of the New York State Journal of Medicine appears a notice of a book which we will not mention here as we have not seen the work and therefore are not in a position to judge personally as to its merits. The New York State Journal remarks as follows: "Its [referring to the book] intrinsic value and the motive in its publication are such that it should be generously supported by the profession, all the more so perhaps because of the failure of the American Medical Association to take over the Caneadea Home, not to speak of the Journal of the American Medical Association's dubious attempt to discredit [the book] in its book notice."

This seems a rather curious reason why the said work should be supported by the medical profession. In other words the profession should favor it because the leading organization of medical men and the national Journal of the organized medical profession of the United States apparently disapprove of it. In a review notice of the same work published in the American Journal of Surgery the reviewer writes as follows: "For the publication of these two massive volumes little excuse is to be found . . . Many of the pages read like daily tabloids, others are fairly scientific. If the idea was to present a complete history of medicine, either popular or scientific, then it may be said that this has been much better done in many other volumes . . . There is also a little wheat among great quantities of chaff." Etc., etc. In a two column book review the American Journal of Surgery points out a number of the faults of the work in question which are of sufficient consequence to make it of questionable value to anyone interested in the subject.

MENTAL HYGIENE AND THE INTERNIST

(PENNSYLVANIA MEDICAL JOURNAL)

When one considers that twenty-five per cent, and possibly more, of the internist's patients are neurotics and psychoneurotics, per se, or that neuropsychiatric symptoms are the prevailing symptoms met with in such a percentage, one should be forcibly struck with the very close relationship of internal medicine to mental hygiene.

Many internists are cognizant of the mental picture presented by the mental patient, per se, in contrast to those of the neurotic and psycho-neurotic as well as those psychoneurotic manifestations which are associated conditions of the physical disease from which the patient suffers. Cases seen by the internist usually fall into: (a) arrested developments; (b) frank psychoses without physical diseases; (c) psychosis dependent on physical diseases; and (d), neurotics and psychoneurotics either as an entity or as a part of the physical picture. The internist may also be the first to come in contact with problem children.

The method of approach most acceptable is for the internist to study his patient, regardless of the mental picture, for the presence or absence of neurologic, physical, chemical, and pathologic findings; for foci of infection; glandular disturbances or diseases of accessory sinuses. Positive factors, regardless of how trivial, bear a dependable relationship to the patient's psychic reactions and should never be lost sight of in handling the case. Along with the program of physical and medical régime.

In those patients in whom no physical factors are found, it behooves the physician to search the etiologic field further as to possible heredity and environmental factors, personality, conflicts, etc. In the event the internist finds such endeavor too time consuming, it is his duty to the patient to refer him to a psychiatrist or to a mental clinic. We should all guard against telling the patient: "You are only nervous. I can do nothing further for you," thus starting him on his endless journey from doctor to doctor, without relief.

The internist will lend a great impetus to mental hygiene if he will remember that a patient's mental condition in any illness is as much at stake as his physical health and should not be lost sight of in his régime of treatment.

LIFE-SAVING EXTRACT PRODUCED FROM GLANDS

The vital hormone of the cortex of the adrenal gland has been obtained in an extract called cortin, Prof. F. A. Hartman and Dr. K. A. Brownell of the University of Buffalo reported to the American Physiological Society meeting in Chicago. The adrenal gland has two parts, one of which, the cortex, is essential to life. When the adrenal cortex is destroyed by disease or accident or removed by operation, the animal or man dies shortly. However, the Buffalo scientists stated that their extract will prolong the lives of animals whose adrenal glands have been removed so that they live from two and one-half to three times as long as untreated animals without adrenals. The extract when properly made is harmless when injected into human beings. It has been given by mouth with beneficial results in some instances. The method of preparing it was briefly described in the report.—Science Service.

THE EDITOR'S EASY CHAIR

BOOKS

*"Oh for a booke and a shadie nooke,
Eyther in doore or out;
With the grene leaves whispering overhead
Or the streete cryes all about,
I maie reade all at my ease,
Both of the newe and old;
For a jollie goode booke whereon to looke,
Is better to me than golde."*

—Old English Song.

*"Without books, God is silent, justice dormant,
natural science at a stand, philosophy lame, letters
dumb, and all things involved in Cimmerian darkness."*

—Thomas Bartholin (1672).

Probably to a great many people one of the greatest satisfactions in life comes from the printed page. Articulate speech and recorded thought have done more to advance civilization than any other factor.

*"Words are things, and a small drop of ink
Falling like dew upon a thought produces
That which makes thousands
Perhaps millions think."*

Reading is in a sense about the only way in which the heir of all ages can enter into his heritage. A long time ago Richard de Bury (1344) wrote concerning books: "These are the masters who instruct us without rods and ferules, without hard words and anger, without clothes or money. If you approach them they are not asleep; if investigating you interrogate them, they conceal nothing; if you mistake them, they never grumble; if you are ignorant, they cannot laugh at you. The library, therefore, of wisdom is more precious than all riches; whosoever, therefore, acknowledges himself to be a zealous follower of truth, of wisdom, of science must of necessity make himself a lover of books."

READING AS RECREATION

A prominent bookseller in Detroit was asked by the writer what class or profession was the best customer of book stores. He replied that doctors as a class were the greatest book buyers and that clergymen and lawyers were about even and a long way behind physicians. This may be construed as a gesture to flatter the writer. Recreation is ordinarily construed to mean renewal of physical strength. There is, however, no greater means of recreation in an intellectual sense than reading. The doctor finds in books the surest relief from the monotony of his daily grind; reading is like sleep, "A balm to hurt minds, great nature's second course chief nourisher in life's feast." Machiavelli has expressed it admirably: "When evening has arrived I return home and go into my study. I pass into the antique courts of ancient men, where, welcomed lovingly by them, I feed upon the food which is my own, and for which I was born. Here I can speak with them without show, and can ask them the motive of their actions; and they respond to me by virtue of their humanity. For hours together the miseries of life no longer annoy me; I forget every vexation." A well selected library will emancipate the reader from both time and space. Reading, like art, is not only an escape from the monotony of the daily routine but it is an escape into a realm of varied interest.

THE INFLUENCE OF BOOKS

Books have filled such a large place in the life of man that much has been written on their influ-

ence. All are so familiar with the attitude of such writers as Ruskin, Carlyle, Emerson, Bacon and Cicero, that further quotation is hardly necessary. When one becomes more specific in the matter of reading he inadvertently reveals his own preferences. To read fiction with any great degree of satisfaction one must of necessity read rapidly and that is what a person accustomed to perusing scientific literature seldom does. There are, however, two modern story writers, both by the way trained physicians, who are worthy the time and attention of medical readers. Warwick Deeping is a medical graduate of Cambridge University, England. After a few years of practice, part of which was devoted to medical service during the War, Deeping turned his attention to literature with the result that "Sorel and Son" was an immediate success which has been followed by a number of other works of fiction. Francis Brett Young, the author of "My Brother Jonathan" and about a dozen other books, was born in 1884. He is of a family in which there had been three generations of doctors. Young was educated for medicine, and practised eight years at sea as ship surgeon. He evidently found writing more to his taste, however, and abandoned the practice of medicine for the pen. Both Warwick Deeping and Francis Brett Young in the books mentioned deal more or less with phases of medical life; Deeping in the education and training of Sorel, and Young depicting country practice in England. Both writers have a diction that is as appealing in its interest as the story they tell.

"READ DON QUIXOTE"

But why should a physician necessarily seek medical or near medical subjects for his recreation? John Hunter when asked to recommend reading matter for young men contemplating a medical career, replied, "Read Don Quixote." The advice is good. This great Spanish novel, unrivalled for its invention, is well worth anyone's time. Cervantes is considered to have created the greatest single figure of literature outside the world of Shakespeare. In Don Quixote we find all the aspirations of men with all their delusions and mistakes. A knowledge of Don Quixote implies a knowledge of the Renaissance in Europe. So John Hunter's advice is worth heeding.

There are a number of biological works treated in a non-technical manner that will be found of great interest, the works of such biologists as J. S. Haldane, J. Arthur Thompson, E. M. East (of Harvard), Edwin Grant Conklin and Harry Fairfield Osborne. It is a difficult matter, not to say presumptuous, to attempt to prescribe reading matter for another and it is a rare person who can do it effectively. The book browser has his cultivated taste and knows pretty well what he likes. So the writer refrains from recommending specific books.

SCIENCE POPULARIZED

So-called outlines such as outlines of history, of literature, of science or of philosophy are apt to be unsatisfactory. They possess a certain value to the lay reader only if written by real men of science or specialists, as the case may be, who have the happy faculty of popularizing their work and writing down to the so-called non-professional reader. Many scientists, like Jeans, Haldane, Eddington, Eliot Smith, Bertrand Russell, Jennings and such historians as James Harvey Robinson and James Truslow Adams possess the happy faculty of writing so as to be comprehensible to the average cultured man or woman who does not happen to be specially trained along the line of the particular subject dealt with by these men.

FRENCH WORKER'S DETROIT EXPERIENCE

A French mechanic by the name of Dubreuil, curious to learn the secret of industrial prosperity in

the United States, came to Detroit and secured a "job" with the Ford Motor Company during the period of respite between the cessation of the manufacture of the old Model T and the beginning of the new product of the Ford Motor Company. After working in Detroit for a number of months, Dubreuil, who appeared to be of much more than average intelligence, returned to Paris and wrote up his experience in a book which he gave the simple but meaningless title, "Standards." The book contained not only a careful analysis of working conditions as they obtained at the time in the big manufacturing centers of this state, but the author tells of an experience he had in visiting the home of one of Detroit's families. While he appreciates the comfort and elegance of American life, he doubts its real purport for the future. In the particular home in which he visited (which is doubtless typical of thousands) he found everything which modern industry could produce to provide agreeable distraction, such as the radio, victrola and piano. No one attempted the piano, however, but a few records were played, followed by an interval of wireless entertainment. Tired of this, a silence followed which gave the visitor an impression of peculiar emptiness and boredom. The place was only a room with the carpets and furniture kept spotless by the vacuum cleaner, but something was missing, namely the conversation and interest of people of culture where social intercourse would more than compensate worn chairs and faded curtains. Our writer goes on to say that when the silence had become almost unendurable, the two men went for a long auto ride, returning to the host's garage two hours later, which interval of time was killed because no other means of entertainment could be found.

One of the great problems (we will not say the greatest) of American life is to know what to do with the spare time which is the result of shortening the working day and the working week. It is said that Americans are twelfth among the civilized nations of the world in the possession of books. This is somewhat surprising when we consider our "book-of-the-month" clubs in which we are spoon-fed the so-called best sellers, and the fact that while our population is only a little more than twice that of Great Britain, we have over a hundred times as many colleges. However, we have evidently allowed other means of enjoyment or of utilizing our spare time to take precedence over literature, for reading is one of the joys of life as well as one of its utilities. Without reading one is confined within a definite spacial environment, and within a definite time-span by memory, to which extent we live our life in common with the lower animals. This condition might have sufficed a century or more ago. Today, however, the non-reader or the so-called practical person who is by the way generally a nuisance, must remain ignorant of many of the important though perhaps less obvious factors that influence human life.

ACCESSIBILITY OF THE BEST

There is an old saying to the effect that we should beware of the man with one book. As I have said, the adage is an old one and contains no longer the germ of truth that it may have contained at one time. The man with one book was presumed to know it with a thoroughness not possible to him who read many. It would come nearer the truth, however, to conclude that he with only one book was not likely to be interested in the printed page and therefore not conversant even with his only possession.

Probably at no other time has the reading public had access to books of the highest character as may be had today. Books have been doubtless a great deal cheaper than at the present time, since

the same factors that increase the cost of living generally affect the craft of bookmaking. There are many able authors in almost every field of human thought and activity. It has been my privilege to visit bookstores in some of the big centers of Europe including London, and I wish to say that I have been in bookstores in this state which are as well stocked with the best current literature as is to be found in many of the European stores.

There are books which one cares to read only once. These, together with reference books, he may obtain from public or circulating libraries. The thoughtful reader, however, will come across many books which he feels like re-reading. These he will desire to make his own and make marginal annotations in them for future reference. This latter class of book will constitute his general library.

J. H. Dempster

THE DOCTOR'S LIBRARY

SURGICAL CLINICS OF NORTH AMERICA—(Mayo Clinic Number, February, 1930.) Volume 10, No. 1, 174 pages with 82 illustrations. Paper, \$12.00 per clinic year; Cloth, \$16.00. (Issued serially, one number every other month.) W. B. Saunders Company, Philadelphia and London.

MEDICAL GYMNASTICS AND MASSAGE IN GENERAL PRACTICE—Doctor J. Arvedson, Arvedson's Gymnastic Institute, Stockholm. Translated and edited by Mina L. Dobbie, M.D., B.Ch., Medical Officer, Chelsea College of Physical Education. Third Edition. P. Blakiston's Son and Co., Inc., Philadelphia, Pa. Price \$2.50.

This is the third English edition of Dr. J. Arvedson's book which has been the standard work on the subject for twenty years. It is based on the fourth Swedish edition and has been revised by both Dr. Arvedson and Dr. Dobbie. The medical and surgical condition which may be treated and the methods of treatment according to the Swedish system are described. The book is intended primarily for students of medical gymnastics in order that they may become familiar with the medical and surgical aspects of the morbid conditions they are called upon to treat. However, there is much of interest to practitioners and students of medicine since medical gymnastics appears to be applicable in some form to most medical and surgical conditions.

COMMUNICATIONS

A CHAPTER FOR PAN-AMERICAN MEDICAL ASSOCIATION

Editor, Michigan State Medical Journal: Recently I attended the Second Annual Meeting of the Pan-American Medical Association at Panama. We were guests of the Republic and were extended all the courtesies in a manner so delightful that the meeting will always be happily remembered. This association was founded in New York in 1926 by a group of physicians with the idea of fostering friendly relations with physicians of the other American countries. The first congress was held in Havana, December 29, 1929, and continued four days. The scientific part of the program was a decided success and the social side could not be surpassed. It was culminated by a trip to various parts of the Island in a special train by the courtesy of President Machado.

The second congress at Panama was replete with fine papers, clinics, receptions, lunches, and banquets.

Among the speakers were Drs. Barker and Dandy of Baltimore, Drs. Albee, Deeks and Valentine of New York. Dr. Charles Mayo, and representative medical men of the various Central and South American republics.

There are Chapters of the Pan-American Medical Association organized in the different states and countries; it requires only seven men to form a chapter. Michigan has none and I am wondering if it would be possible to interest enough of our men to form a Michigan Chapter. The annual dues are \$5.00 and very attractive railroad and steamship rates are given to the members and their families. The next meeting is in Lima, Peru, and the republic has extended a very cordial invitation to the Association to attend. The meeting will probably be held the latter part of January, 1931, an ideal time for a winter vacation, escaping the rigors of the North, enjoying the beauty and warmth of the South. The hospitality of our Latin-American confrères is unbounded as many physicians know. Should there be any members of our society interested in the Association I shall be glad to hear from them. The proceedings of the society—the first meeting—are printed and form a volume of 600 pages in Spanish and English text. The second will soon be published and will undoubtedly be as large and as interesting. There is no charge to members for this report. The Revista Medica Pan-Americana is the official organ of the Association; it is published in New York, printed in Spanish and in English, and published monthly at \$3.00 a year.

Yours very sincerely,

WALTER J. CREE.

3946 Grand River Avenue,
Detroit, Michigan,
May 15, 1930.

NATIVE MALARIA IN MICHIGAN

Editor Journal Michigan State Medical Society: Malaria was one of the scourges in the early history of Michigan. This was especially true of the central portions of the lower peninsula, where "Ague" retarded the settlement of some districts. Dr. Burr, in his history of the Michigan State Medical Society, cites instances of quite widespread malarial infection as late as 1891. The rapid advance of the settlements and the use of drainage methods in making the country habitable eventually freed the state to a large extent of the malarial bearing mosquito, the Anopheles.

During the summer of 1928, which was marked by a heavy precipitation and rank growth of vegetation, numerous cases of malaria appeared in the vicinity of Flint and Genesee County. It is the appearance of these cases that appears to warrant this brief report of the malaria situation and an observation regarding its present day epidemiology, as it applies to Public Health. Flint being an industrial city, numerous people have been attracted thereto, notably from the South, in the hope of gaining employment available in the factories. Of all the cases which were definitely diagnosed by the demonstration of the plasmodium in the blood, a great majority have been southern people from known malarial districts. We have in our records, however, fourteen cases of malaria in native Michigan people, who give a history of never having been outside of the state, three of whom have never been more than 100 miles from Flint; of these, two were small children.

According to R. H. Pettit, Professor of Entomology at Michigan State College, there are numerous species of the malaria bearing mosquito native to Michigan. He says they are quite commonly found in basements. As Vaughan has said, "There can be no malaria without the anopheles mosquito and a human host." In Michigan the anopheles is pres-

ent and the infested human host is being supplied by the incoming workmen and their families, from Southern malarial districts. They are bitten by our native *Anopheles*, which in turn infects native born inhabitants. The seriousness of this situation is apparent at once. Malaria is definitely a Public Health problem in Michigan.

L. R. HIMMELBERGER.

Flint, Michigan,
May 15, 1930.

THE SPHENOPALATINE TEST

To the Editor: In the April issue of the Journal for 1930, page 297, Hiram Byrd, M.D., in his article on "the sphenopalatine test" makes this statement:

"Familiarity with the phenomena associated with the sphenopalatine test and due regard for their import would have saved McClintic from the error that 'eye pain is transmitted via the sphenopalatine ganglion, and not over the ophthalmic division of the V nerve' just as it saved Sluder, the original author of that error, from continuing in it."

I shall disregard the first part of the statement in which it is intimated that I am not familiar with the phenomena associated with anesthetizing the sphenopalatine ganglion. I have been practicing this as a therapeutic measure for some years and I never consider operation for trifacial neuralgia or other head pains until I am satisfied that head pains cannot be relieved by anesthetizing this ganglion.

His reference to my statement as to the path of transmission of eye pains leads me to infer that he questions my statement made in the article referred to in the December issue of the Journal, 1929, page 869.

In substantiation of that statement I wish to say that it was made with the knowledge (1) that three types of sensory impulses are recognized, namely, epicritic, protopathic, and somatic; (2) that modern neuro-physiologists regard the non-medullated or sympathetic type of nerve fiber as the conductor of painful impulses.

The eye, therefore, is supplied by medullated or somatic nerves as well as by sympathetic or non-medullated nerves. In other words, the eye has a somatic and visceral nerve supply. As an example of the functional significance of the somatic nerve supply is the corneal reflex which is effected through the ophthalmic division of the V nerve (sensory) and the VII (motor). Sensation of the eyeball is dependent upon the sensory fibers of the V nerve to the conjunctiva (ophthalmic division of the V nerve). But the pain fibers that transmit the impulses in painful iritis are non-medullated (visceral sensory) as are the motor fibers to the iris and ciliary muscles, and these fibers, as anyone familiar with the facts of nerve physiology knows, reach the eye through the carotid and third nerves.

It follows, therefore, that, if the V nerve is "blocked," "anesthesia of the cornea" results which really means anesthesia of the conjunctiva, and somatic and epicritic sensations are lost to the eye but the protopathic sensations still persist because of the integrity of the visceral nerves. The visceral nerves as stated above reach the eye through the carotid, long and short ciliary nerves. It is this anatomical fact that accounted for corneal ulcers from the avulsion of the Gasserian ganglion for trifacial neuralgia. By the newer method of cutting the posterior root the visceral fibers, which reach the ganglion from the ganglion of Meckel through

the carotid nerve, escape and the ulcers do not occur.

I venture the assertion that if Dr. Sluder, the thorough scientific student that he was, had had at his command the facts of neuro-physiology as known today, he would have recognized the basis for his observations and would have corrected his statement in accord with proven scientific facts, for his statement was correct and no facts have been produced by anyone to disprove them. Theories and hypotheses are not facts and until Byrd produces anatomical and physiological data to refute the statements to which he takes exceptions they will stand as they are.

While I admire Dr. Byrd for his enthusiasm, and envy him the large clinical experience that he has enjoyed, yet I feel that it would give more weight to his statements if he would back them up by proven anatomical and physiological facts. He cannot find these in modern textbooks of physiology and anatomy but only by familiarizing himself with the work of the recognized neuro-physiologists in this country and abroad.

The literature abounds in the work of DeJérne, Ramon Cajal, Brouwer, Ranson, and scores of others. Every clinical observation that Dr. Byrd has made can be explained upon a scientific basis without postulating or theorizing, much less disputing the statements made by his professional colleagues and his dead teacher in order to substantiate his speculations, and the results he claims are not new, for similar observations have been reported by others over a period of nearly thirty years and even the effects produced on the blood pressure by attacks upon the sympathetic ganglia have been known for twenty-five years and the effects upon the circulation for eighty-five years.

C. F. MCCLINTIC.

Detroit, Michigan,
April 7, 1930.

INFANT MORTALITY

April 29, 1930.

Dear Doctor Warnshuis:

I thank you for your letter of April 19, transmitting a letter from Senator Couzens relative to the Jones-Cooper bill, H. R. 1195 and S. 255.

Proponents of Sheppard-Townerism have been claiming credit for declines in infant and maternal mortality rates, professing to attribute them to the operation of the Sheppard-Towner Act. I wonder if they will be as ready to assume responsibility for the increased mortality rates that occurred during the seventh year of Sheppard-Townerism, 1928?

The infant mortality rate for the entire birth registration area was 65 in 1927, but was 68 in 1928. The maternal mortality rate was 65 in 1927, but rose to 69 in 1928.

The infant mortality rate is stated on the basis of 1,000 live births; the maternal mortality rate on the basis of 10,000 live births.

In Michigan the record was not so bad, for the infant mortality rate rose only from 68 to 70, and the maternal mortality rate declined from 68 to 66. Still the maternal mortality rate in Michigan is higher than it was in 1924 when it was 65 and in 1925 when it was 64.

Yours truly,
WM. C. WOODWARD,
Director, Bureau of Legal Medicine
and Legislation, American
Medical Association.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Annual Meeting A. M. A., Detroit, June 23 to June 27.

Dr. B. R. Corbus attended the gastro-enterological meeting in Atlantic City, May 5.

Drs. R. S. Taylor and Hammond of Detroit are spending a few weeks in Europe.

Dr. William G. Schlegelmilch of Detroit announces the legal change of his name to William G. Saunders, M.D.

Dr. R. A. Davis of Detroit is able to be around after being confined to his home with coronary thrombosis.

Dr. John L. Chester of Detroit, who has been laid up for a number of weeks, is able to attend to his professional duties again.

Butterworth Hospital, Grand Rapids, is now conducting a monthly Clinical Conference for the physicians of western Michigan.

Detroit has ranked second in the Inter-city Health Contest in 1929; Milwaukee gained first place. There were 125 cities in the competition.

Dr. E. S. Gurdjian of Detroit addressed the Macomb County Medical Society May 5 on Peripheral Nerve Injuries and Treatment.

Delegates are urged to send in their requests for hotel reservations to the Whitcomb Hotel, St. Joe, before August 1. See the reason in an announcement in this issue.

The July Journal, as well as the August and September issues, will contain announcements relative to our annual meeting in Benton Harbor on September 15, 16 and 17.

On account of ill health Dr. M. Boyd Kay of Detroit was compelled to resign as chairman of the section on Pediatrics. President Brook has appointed Dr. T. D. Gordon of Grand Rapids to serve as chairman.

Dr. and Mrs. H. Wellington Yates of Detroit sailed on the Republic on May 13 for Europe where they will visit Hamburg, Berlin, Prague, Vienna, Munich, Oberammergau, thence to Italy where they will visit Naples and Venice.

Do not fail to call at the Michigan State Medical Society Booth in the exhibition Section of the A. M. A. Detroit meeting. The first volume of our History will be on display. This booth is for the assistance of Michigan members.

Dr. Morris Fishbein, editor of the Journal of the American Medical Association, gave an address at the regular meeting of the Washtenaw County Medical Society April 30th. The meeting was held at the Michigan Union. Dr. Fishbein, who is always entertaining, drew a large attendance.

Dr. B. Friedlaender of Detroit has been assigned by the War Department at Washington as operating surgeon in Evacuation Hospital No. 73 in the U. S. Army reserve. His commission as a major, Medical Corps U. S. Army, was recently renewed for another term.

The election of officers of the Wayne County Medical Society resulted as follows. President, Dr. J. M. Robb; President-elect, Dr. H. W. Plagge-meyer; Secretary, Dr. E. D. Spalding, and Trustee, Dr. George McKean. The vote was the highest in number of any election in the history of the Wayne County Medical Society. 722 votes were polled.

Dr. Ray Andries, 1737 David Whitney Building, Detroit, is the chairman of the subcommittee on alumni gatherings of the Local Committee on Arrangements. Officers of alumni associations who desire to make arrangements for meetings and dinners should communicate at once with Dr. Andries, who will be glad to make necessary arrangements for dinners and other gatherings.

Dr. H. Lee Simpson of Detroit was the speaker at the May meeting of the Calhoun County Medical Society held at Albion. Dr. Simpson's subject was "General consideration of present day surgical approach to accessory sinus and naso-pharyngeal disease." The April meeting was addressed by Dr. F. C. Kidner of Detroit, whose subject was "Bone Tuberculosis." The meeting was also addressed by Dr. Walter H. Sawyer.

The election of officers of the Michigan Association of Industrial Physicians and Surgeons held recently at the Hotel Durant, Flint, Michigan, resulted as follows: President, Dr. C. S. Gorsline, Battle Creek; vice president, Dr. C. W. Brainard, Battle Creek; secretary-treasurer, Dr. Frank A. Poole, Lansing; board of directors, Dr. G. C. Penberthy, Detroit, Dr. R. H. Denham, Grand Rapids, and Dr. Carl F. Moll, Flint.

The next meeting of the Northern Tri-State Medical Society will be held at Ann Arbor the first week of April, 1931. The officers for the current year are: President, Dr. Morris Gillett of Toledo, Ohio; vice-president, Dr. S. J. Slosser, Defiance, Ohio; secretary, Dr. E. B. Pedlow, Lima, Ohio; treasurer, Dr. Gold Larson, Laporte, Indiana; councillors, Drs. Charles Kuhn of Detroit; Carl D. Camp, Ann Arbor; Dr. Flemming of Elkhart, Indiana.

Dr. I. L. Polozker of Detroit has been appointed Director of the Psychopathic Division of the Recorder's Court. Dr. Polozker succeeds Dr. Theophile Raphael, who resigned in March to undertake research work at the University of Michigan. Dr. Polozker is well known to the profession of the State. He is a Fellow of the American Psychiatrists' Association and one of the attending Psychiatrists at the Detroit Receiving Hospital.

On Tuesday, June 24, the day before the Scientific Sessions of the American Medical Association begin, the American Heart Association will have an all-day Scientific Meeting, which will be open to all of

the members of the medical profession and any others who are interested, to whom a cordial invitation is extended. This meeting will be held in the auditorium of Detroit College of Medicine and Surgery, at the corner of Mullett and St. Antoine Streets.

The Annual Detroit College of Medicine Alumni Association dinner will be held at the Statler Hotel, Detroit, on the evening of June 25th. The price per plate is \$2.25. Dr. James Inches, who has distinguished himself as a traveller and big game hunter in Africa, will show a unique moving picture film of wild animals in their native haunts. All graduates of the Detroit College of Medicine and Surgery are requested to keep this evening free to attend this dinner.

June brings to the medical profession of this state unusual opportunities for post-graduate study right at our own doors: the three weeks' program under the department of Post-Graduate Medicine of the University of Michigan and the Michigan State Medical Society; this followed by the annual convention of the American Medical Association which each year constitutes the milestone of progress in medicine and surgery. The fact of holding all meetings and scientific exhibits in one building adds to the convenience of fellows and members and guests who attended.

The Victor C. Vaughan Society is a medical history club in connection with the medical department of the University of Michigan. The Society is composed of the senior medical students of the University under the direction of Dr. Frederick C. Collier. Wednesday evening, April 30, marked the closing of a very pleasant and profitable year which was celebrated by the first annual banquet at the Michigan Union. Mr. Daniel Le Duc, a member of the club, presented a very ably prepared paper on the late Sir William Osler. The paper was discussed by Dr. Fielding H. Garrison, the noted medical historian, who was the guest of honor on the occasion. Dr. D. M. Cowie discussed the subject also as representing the medical faculty. Approximately one hundred persons, including a number of guests from Detroit, were present.

"Should doctors be interested in politics and take an active part? The recent affair in the city of Pontiac, we believe, answers the question very satisfactorily. The questions confronting the city were put squarely before the Pontiac doctors in a way that demanded they take a stand one way or the other. Let it be said to their credit, that with one or two exceptions, all agreed to wage a 'militant' campaign backing a sane and constructive government. We can safely say that the margin of victory was accounted for by the activity of the medical profession of Pontiac. If the same effort and interest were manifested in legislation affecting the welfare of the public and our profession the Michigan Legislature would soon find that the medical profession was a body to be considered seriously."—*The Bulletin of the Oakland County Medical Society*.

Dr. Angus McLean of Detroit had a somewhat unique experience about the first of May. He operated on a patient in 1908 who had been badly injured about the head in an accident. The operation entailed decompression of the bones of the skull as well as rather extensive plastic work about the face and ear. The patient paid a small portion of the fee at the time, there being an understanding

between him and his physician that he should take his time with the remainder. Both patient and doctor had lost all connection with each other during the past twenty-one years, when the patient walked into Dr. McLean's office, paid the remainder of his bill and insisted on adding the interest, stating that his conscience had troubled him during this time, that he had waited until his family had grown up, when he felt that he could pay the bill without undue embarrassment to his family.

Everyone has followed the Literary Digest poll on the prohibition problem. However, the special straw vote is of unusual interest. The result for the State of Michigan is as follows: There were 2,720 ballots returned by the doctors of Michigan of which 715, a return of more than 25 per cent, were for enforcement of the prohibition law, 513 for modification and 1,492 for repeal. The figures given for Literary Digest subscribers at large for Michigan were as follows: 25,896 ballots returned, of which 9,471 were for enforcement, 4,779 for modification and 11,646 for repeal. Over 50 per cent of the total ballots returned by physicians included a desire for repeal of the prohibition measure, while of the people at large considerably less than 50 per cent of the ballots returned asked for repeal of the law. Of the profession of law of Michigan 1,573 ballots were returned, divided as follows: for enforcement 436, for modification 189 and for repeal 948.

A Post-Graduate Clinic was held at the Hotel Olds, Lansing, Michigan, under the auspices of the Medical Society of Ingham County and the Second Councillor of the Michigan State Medical Society. The program was as follows: Opening Remarks, Dr. B. F. Greene, Hillsdale, Member of Council Michigan State Medical Society; Dr. Fred Collier, Professor of Surgery, University of Michigan, Ann Arbor, Michigan; Pathology and Treatment of Osteomyelitis, Dr. Phillip Kreuscher, Professor of Orthopedic Surgery, Loyola University, Chicago, Illinois; Massive Collapse of Lungs, Frank J. Hirschboeck, M.D., Duluth, Minnesota; Arthritis-Rheumatic Fever, Ralph A. Kinsella, M.D., Professor of Medicine, Head of Department of Internal Medicine, St. Louis University, St. Louis, Missouri; Diagnosis and Treatment of Gastro-enterological Cases in General Practice, Frank Smithies, M.D., Professor of Medicine, University of Illinois, Chicago; Spinal Anesthesia, Frank A. Kelly, Detroit, Michigan; Injection Treatment of Varicose Veins, Virgil S. Counsellor, M.D., Mayo Clinic, Rochester, Minnesota.

Dr. Angus McLean of Detroit, who was chief of Base Hospital No. 17 during the World War, had conferred upon him the insignia of the French Legion of Honor by Pierre De Lattre, the French consul stationed at Detroit. This represented the rank of chevalier in the order. The occasion of the presentation was a banquet given in honor of Dr. McLean by his fellow members of the Detroit board of education. The text of the certificate is as follows: "Ordre National De La Legion D'Honneur. Honneur Patrie. Le Grand Chancelier de L'Ordre National de la Legion d'honneur certifie que, par Decret du Vingt huit Novembre mil neuf cent Vingt neuf. Le President de la Republique Francaise a confere a Mr. le Dr. Angus McLean, citoyen Americain, Docteur en Medecine, Chirurgien a Detroit la Decoration de Chevaliere de l'ordre National de la Legion d'honneur Fait a Paris, le 5 Decembre 1929." Among the guests were intimate friends of Dr. McLean as well as representatives of six different nations. Dr. McLean has had already conferred upon him the United States distinguished service medal, the Royal Academy Medical Corps medal of Great

Britain and also a medal from the University of Warsaw, Poland.

In the Journal of the American Medical Association for October 12, 1929, it was announced that the Council on Pharmacy and Chemistry had established a Committee on Foods to examine food products and literature regarding their composition and the claims made in relation to their application and usefulness—all subject to a series of rules, under which the Committee on Foods proposes to operate.

The purpose of the above statement is, first, to acquaint the reader with the above movement in the interest of public health, and, second, to advise that Mellin's Food and literature concerned have been considered and that Mellin's Food is accepted by the Committee on Foods and that the Mellin's Food Company is entitled to make use of the "Seal" of the Committee. Your attention is requested to this insignia which is reproduced in the Mellin's Food Company's advertisement in this issue.

For a great many years accurate analyses of Mellin's Food and of Mellin's Food as prepared for the feeding of infants and as applied in the management of the diet in illnesses of children and adults have appeared regularly in this publication and in literature placed in the hands of physicians generally.

Notwithstanding the fact that this consistent work with the medical profession had long ago resulted in establishing Mellin's Food as a product of superior quality, it must be gratifying to the Mellin's Food Company to have it all confirmed by a committee acting upon the authority of the American Medical Association.

THE AMERICAN MEDICAL ASSOCIATION MEETING

Detroit is ideally and beautifully located for a convention. It can be easily reached by any of the main railroads, by the best paved automobile roads in the world, by palatial steamships from Quebec, Montreal, Toronto, Buffalo, Cleveland, Chicago, Duluth, Port Arthur, or by air from almost anywhere. Fare and a half rates are given by all lines, even the famous Stout Air Lines from Chicago and Cleveland. Think of traveling from Chicago to Detroit and return on these very safe airships for \$27.00. Or from Cleveland to Detroit and return for \$15.00! They have carried over 110,000 passengers in their Ford Trimotor planes over a million miles, with a record for perfect safety.

But reservations must be made early to travel thus by air, and full information would better be secured from the company's office, 139 Bagley Avenue, Detroit.

There will be plenty of opportunity, especially for the ladies, to see the interesting things in and about Detroit. About 3,600 of those attending the meeting will be guests of Mr. Henry Ford at his wonderful Greenfield Village, where opportunity will be provided to see and feel and learn much American History, including the history of medicine in America, by visiting the actual old buildings and seeing the old machinery, instruments, etc., in actual operation, the old Inns, to see and understand the life of American people as it was many years ago. Unfortunately, only 3,600 can see this village in the 5 days. Mr. Ford has so kindly opened it for our pleasure, because it is physically impossible to accommodate more. The Village is far from completion and people must be taken through in squads of 20 with a guide, beginning at 8:20 Monday morning, June 23, and continuing until Friday afternoon. Only registrants holding tickets for cer-

tain hours and certain days will be able to enjoy this privilege. Opportunity, of course, will be provided for all to visit automobile and aviation industries.

The ladies will have trips in the afternoons to Bloomfield Hills, Grosse Pointe, along Lake St. Clair, the Detroit River, and Lake Erie, and Teas will be served.

On Saturday a boat ride will be given up to the Flats and down to Lake Erie.

The Scientific Exhibit will be a wonder—the greatest ever given by the American Medical Association. The Scientific Sessions will be full of interest and information. Clinics will be held at some of the hospitals on the Saturdays preceding and following the meeting. There will also be operative and other work going on as usual in all the hospitals much of the time during the Convention and the guests interested are invited.

Doctors of Michigan! You, as well as Wayne County, are hosts to the American Medical Association. Come and help make our guests welcome.

SURGICAL TREATMENT OF HYPERINSULINISM

Hyperinsulinism is a condition which may cause serious disability, and sometimes death. Frank N. Allan, William C. Boeck and E. Starr Judd, Rochester, Minnesota, assert that when the hypoglycemic tendency is so strong that the patient is incapacitated, surgical treatment is justified. In one case reported by them in which hyperinsulinism was due to tumor of the islands, operation was followed by relief from hypoglycemic symptoms. In four cases in which organic change in the pancreas was not demonstrable, the results of partial pancreatectomy were not entirely satisfactory; yet the improvement observed in three cases was encouraging. Hope of control of the disorder by surgical measures, in such cases, may lie in more radical resection.

—Journal A. M. A.

DIFFERENCE IN FACES DUE TO DIFFERENCE IN MUSCLES

The different expressions seen on the faces of members of different races is partly due to the fact that the muscles of the face are different in different races, Dr. Ernst Huber, associate professor of anatomy at the Johns Hopkins University, told members of the American Association of Physical Anthropologists. Dr. Huber has made anatomical studies of a large series of American Negroes of all ages and compared them with whites, with an adult Chinese and with an adult Hawaiian. He also analyzed the facial expression in various human races. "Racial characteristics are more conspicuous in the facial musculature than in the rest of the muscle system, where differences are likewise recognizable," he said. While differences in the facial expressions of different races are due to differences in the muscles, skin and tissues beneath the skin of the face, they are even more the result of characteristic racial differences in mental and emotional reactions, Dr. Huber said.—Science Service.

MICHIGAN'S MEDICAL HISTORY: Did you order your set? If not, better do so now ere the edition is exhausted. Two volumes, ten dollars. The first volume may be seen at the Michigan State Medical Society's Booth at the A. M. A. Commercial Exhibit in Detroit.

ANNUAL MEETING: Mark on your calendar the dates of the coming annual meeting in Benton Harbor—Sept. 15, 16, 17. A splendid program is being arranged.

DEATHS

DR. LOUIE V. STEGMAN

Dr. Louie Vandervoort Stegman died in Los Angeles, California, March 23, 1930. Born in Ohio in 1878, she graduated in medicine in 1906. Most of her professional career was devoted to ophthalmology at the Battle Creek Sanitarium, where, as head of that department, she strenuously gave both scientific and personal service to all who came. Her special knowledge of the eye and its diseases came from intensive courses taken at the New York Eye and Ear Infirmary, at Chicago, with Prof. Fuchs in Vienna, as well as a year's experience in Shikarpur, India. She held the certificate of the Board of Examiners in Ophthalmology, and was a member of the Academy of Ophthalmology and Otolaryngology. She was an active member of the Calhoun County Medical Society, the Michigan State Medical Society, and a fellow of the American Medical Association.—*Calhoun County Medical Bulletin*.

DR. A. FLOYD KINGSLEY

Dr. A. Floyd Kingsley died at his home April 17, 1930. He was born in St. Joseph County, September 15, 1876. Graduating from the University of Michigan in 1900, he came to Battle Creek in 1905 from Centerville, where he made the beginning of his practice. In the twenty-five years' continuous labor in his chosen field he worked hard, was thorough, diligent and conscientious. He leaves a wife, two daughters, and a son, the latter being a medical student at Ann Arbor. Dr. Kingsley was interested, and was very active as a member of the Calhoun County Medical Society, serving as its secretary from 1912 to 1919, and as its president in 1925. He was identified with all the progressive activities of organized medicine and gave unselfishly of his time to committee activities. He labored as a public health educator and was ready to meet every demand upon his time and energy to promote the health interests of the community. As a father and husband his high ideals of Christian character made him a man whose virtue and kindly nature were worthy of emulation. He had a hobby. It was his home, where early and late his recreation was taken among his flowers, with the trees, and accompanied by the songs of birds. And not the least of his joys was the pleasure that came to him as a church worker. Constant in attendance, active and whole-hearted in his efforts, and faithful to the Christian trust, he brought honor to his colleagues by his steadfast faith in the triumph of right through fellowship with religious organization. He was a true physician, and toiled to excel in the art of his profession; but, more than this, he was a friend to those in need of help. His example of nobility, and his life filled with deeds of helpfulness, makes his loss keenly felt, and will ever be an inspiration to those coming after.

To the family of Dr. Kingsley this Society extends its sincerest sympathy.—*Calhoun County Medical Bulletin*.

DR. J. J. DELBRIDGE

Dr. J. J. Delbridge died at his home in Detroit on April 6th. The cause of his death was cardiovascular disease. Dr. Delbridge was born on December

2, 1872. He received his education in the schools of Detroit and his professional education at the Detroit College of Medicine, from which he graduated in 1893 at the age of twenty-one. Dr. Delbridge was married in 1897 to Miss Mary Jamieson, daughter of the late Dr. Jamieson who was connected with the Detroit College of Medicine. Dr. Robert A. Jamieson of Detroit was a brother-in-law of Dr. Delbridge. Dr. Delbridge began practice at Algonac, Michigan, but after two years moved to Detroit, where he had practiced up to his last illness.

During the World War, Dr. Delbridge was in active service as Captain and Instructor in Military Tactics at Fort Oglethorpe. Following the Armistice, he spent a year in post-graduate work at the New York Lying-in Hospital, whence he returned to Detroit to take active part in exercising the duties of staff of the Women's Hospital. He lectured to the nurses in Obstetrics for many years.

Dr. Delbridge was a member of the Wayne County Medical Society, Michigan State Medical Society, the American Medical Association, the D. A. C. and the Detroit Golf Club.

SCIENTISTS WORKING APART ACHIEVE SAME RESULTS

Within the same week, almost on the same day, two groups of scientists, working separately at different institutions, have announced the extraction of a potent substance from the cortex of the adrenal gland. A report of studies on this important subject by Dr. W. W. Swingle and J. J. Pfiffner of Princeton University appeared in *Science* almost simultaneously with the report made to the American Physiology Society meeting at Chicago by Prof. F. A. Hartman and Dr. K. A. Brownell of the University of Buffalo.

Dr. Swingle and his associate had previously reported the production of adrenal cortex extract, but they have just obtained a watery preparation which is much more powerful than their first extract.

Prof. Hartman and Dr. Brownell of Buffalo call their extract cortin. It is obtained by a somewhat different method.

The cortex, or outer layer, of the adrenal glands is known to be essential to life. When both glands are entirely removed, death follows, although a small portion of cortex is sufficient to maintain life. Scientists have been investigating the subject for some years, trying to discover whether the cortex has any other functions and also trying to obtain a cortical extract.

Dr. Swingle and his associate removed both glands in a series of cats and then administered their new, watery extract. The cats remained alive in perfectly normal condition up to forty or fifty days. Some were still living after eighty days. They could not be distinguished from normal unoperated cats, and ate, played, fought with one another and kept themselves sleek and clean. Cats which had had both adrenals removed but which received no extract lived only seven days, on the average, the Princeton investigators reported. They believe that they have successfully extracted from the adrenal cortex an active hormone which maintains life in animals that have had both adrenal glands removed.

The Buffalo investigators reported that their extract could safely be injected into human beings, and that it had been given by mouth with beneficial results. These men also worked with animals and found that their extract would prolong life in animals which had no adrenals so that the treated animals lived from two and one-half to three times as long as the untreated animals.—*Science Service*.

SOCIETY ACTIVITY

Revealing Achievements and Recording Service

Frederick C. Warnshuis, M. D.
Secretary Michigan State Medical Society

FIFTY-FIVE YEARS OF PRACTICE: A TRIBUTE TO D. W. FENTON, M.D.

Eighty-two years of age, with fifty-five years of medical practice, still attending to the demands of practice, vigorous, mentally alert, keenly interested in life, fully abreast of the times—these are the outstanding factors of Dr. D. W. Fenton of Reading, Michigan.

The following incidents were gleaned from his daughter and son-in-law during a recent visit to Hillsdale. They are imparted in "interview form."

Surely no one in the world is more deserving of every bit of happiness that may come his way than Dr. Fenton, who has so conscientiously and unselfishly devoted his life to the practice of medicine.

Many things I have learned about his early life in our quiet visits, many from my daily contact with him, for I have known him all my life, and have been his son for seventeen years.

Dr. Fenton is the only child of Susan Hall and Daniel Babcock Fenton and was born in Delaware County, Ohio, October 17, 1848. His mother died at his birth and his father died when the doctor was five years old. His father was a farmer, surveyor and teacher, being one of the early instructors in Central College, Ohio, which later merged with the Presbyterian College at Wooster, Ohio. He also taught for some time in Memphis, Tenn.

Father received his early education in Galena, Ohio, attending the high school there and then finished his high school course at Fremont, Indiana. He took his medical training at the University of Michigan and the Detroit College of Medicine, spending the first two years in Ann Arbor and then taking his degree at Detroit in 1876. He has often remarked that he considered himself most fortunate to have come under the regime of such men as Dr. Angell, Dr. McLean, Dr. Ford, Dr. Andrews, Dr. Lyons, Dr. Theodore A. MacGraw, Dr. Carstens, Dr. Frothingham and others whose lives

and teachings touched the lives of their students so benignly and with such profound wisdom.

Shortly before finishing medical school he was married to Harriet Thompson of Ray, Indiana. They had three daughters, two of whom died in early childhood. Mrs. Fenton's death occurred in 1914.

Father began practicing medicine in Angola, Indiana, with Dr. H. D. Wood and later practiced for a time in Ray and Fremont, Indiana. During those years he was a member of the Tri County Medical So-



Dr. D. W. Fenton

ciety, comprised of doctors from Steuben, De Kalb and Grange counties and served as its president at one time.

In 1887 he located in Reading, Michigan, in partnership with Dr. Benjamin G. Strong, which partnership terminated the following year with Dr. Strong's removal to

Long Island City, N. Y. Dr. Fenton has practiced in Reading ever since.

How can I tell you all I would have you know about my father? To really know you should see him every day about his tasks. The practice of medicine is his first thought, his deep concern, his abiding joy.

This past winter has been a particularly busy one. He has made country calls and braved the ice and drifts as cheerfully as I know he braved them the first year of his practice; and he has made night calls, too, despite my pleading for him to abandon them. He is most certainly that type of family physician who practices in his wide range of therapeutics the healing art for both soul and body.

He is an indefatigable worker. A sample of some of the things he does occurred just yesterday. He was up early and down to his office at eight to "get some medicine off on the mail." He made his morning calls and went over to the high school and assisted in a general vaccination for smallpox. In the afternoon he attended to his office, came home to dinner, was called away during the dinner hour and didn't get home until after three this morning. Of course this is somewhat unusual but every day is full of interest for him.

As you know, he is a most faithful attendant of the various society meetings and clinics. He is planning on the A. M. A. this June. He enjoyed to the utmost the secretaries meeting in Chicago last winter and returned home inspired to greater endeavor.

I have loved him since I was a little boy. Since Mother's death we have resided with him. I consider it has been a great privilege to live with him, for one can not live in the household of a conscientious doctor and not establish for himself a very workable standard of the real values of life.

He is up-to-date with the literature of the day, a constant student; and often I come upon him in his office, reading, marking and filing the journals and papers to which he wishes to refer. And just as often I find him pouring over his microscope, glancing up to say, "Look son! here is a splendid specimen." Life holds such a vital interest for him. He is young in heart and never speaks of his age. Not inclined to reminiscence, but always forward-looking.

His burning ambition has been to be a "good doctor" and this he most certainly has achieved. Father is a most modest per-

son and surely would not approve of a member of his family saying this; but I am certain that his colleagues of the county would agree with me that he has made a marked success in the medical treatment of diseases of the thyroid gland.

He is keenly interested in the affairs of the day, is an Elder of the Presbyterian Church, belongs to the Michigan Society of Mayflower Descendants, being descended through William Brewster, "the good Elder of Plymouth," has served his community in various official capacities, belongs to The Hillsdale County Medical Society, Michigan State Medical Society and is a Fellow of the A. M. A. It is needless to tell you that at all times the welfare and prosperity of the Hillsdale County Medical Society, of which he has been secretary for twelve years, is of absorbing interest and concern to him. Knowing you would be interested I am enclosing a paper which he read a couple of years ago before the Hillsdale Rotary Club and which was published in full in the Hillsdale Daily.

For over twelve years Dr. Fenton has served as Secretary of the Hillsdale County Medical Society efficiently and in a most creditable manner. We wish all our county secretaries might be as capable as this good doctor.

Such then is the richness and fulness of this man's life. It is given to but few to enjoy a similar life. Dr. Fenton has fully deserved the heritage. We take pleasure in recording this tribute.

The sincere wish of the profession in Michigan is that the years may still be many ere he enter into the shadows of the foothills. May his life, his work, his influence stimulate the rest of us to higher and nobler attainments. May the sweet perfume of evening breezes bring peace and comfort to him. May the twilight glow reflect beams of physical comfort and warmth. And finally, may a certain grim adversary recognize in him a noble foe and deal gently with him. We are grateful to Dr. Fenton for that which he has wrought for medicine and the profession in Michigan.

DELEGATES—ATTENTION YOUR HOTEL RESERVATIONS

The arrangements for the Benton Harbor meeting provide that the House of Delegates will convene in the Whitcomb Hotel in St. Joe on Monday, September 15. All

three sessions of the House will be held in that Hotel that day.

In order that delegates may obtain hotel reservations in that hotel the management has agreed to accept only the request for reservations for delegates up until August 1.

Delegates desiring reservations in the Whitcomb Hotel *should write for their reservations before August 1.*

We assure our members that ample *first class accommodations* will be available in St. Joe and Benton Harbor. Send in your reservations—you will be well cared for.

ADVERTISING

Our advertising section should be and is of personal interest to every member. Our advertisers are firms and persons of proven responsibility. They proffer some article or service that every doctor finds to be of need for successful practice. These advertisers patronize you and make your journal possible. In return you should patronize them—in fact, you are obligated to do so. We urge that you acquire the habit of reading our advertising section and accord your patronage to these advertisers who make the Journal possible. Begin now.

A. M. A. DETROIT

Are you going? You will miss a most wonderful meeting if you permit yourself to be listed as a "stay-at-homer." For the convenience and assistance of the members of the Michigan State Medical Society there will be a Michigan Booth at the Registration Bureau. Call on us if we can be of help to you. This booth is arranged for your service.

"GIVE ME"

A month does not pass in which your Secretary does not receive from four to ten "give me" letters. They range from a complimentary subscription for a year to an advertising page. In between are requests for copies, even from India, reprints, personal property sales advertisements, books, mailing lists, boosting notices and personal laudation articles from individuals imbued with their ability. All come from non-residents. They are all consigned to the waste basket—but we have had to buy a bigger basket.

To our members we say ask all you want and the endeavor will be made to meet your request. To all others—Cease bothering us!

SECOND DISTRICT CONFERENCE

A most successful District Post Graduate Conference was conducted in Lansing, April 24. The registered attendance was over 225. The following program evoked much interest.

Program

10:00 A. M. Opening Remarks

Dr. B. F. Green, Hillsdale, Member of Council Michigan State Medical Society.

10:15 A. M. "Goitre and the Thymolymphatic Constitution."

Dr. Fred Collier, Professor of Surgery, University of Michigan, Ann Arbor.

11:00 A. M. "Pathology and Treatment of Osteomyelitis."

Dr. Phillip Kreuscher, Professor of Orthopedic Surgery, Loyola University of Chicago.

Noon—Luncheon, Wisteria Room.

1:30 P. M. "Massive Collapse of Lungs."

Frank J. Hirschboeck, M.D., Duluth, Minn.

2:15 P. M. "Arthritis-Rheumatic Fever."

Ralph A. Kinsella, M.D., Professor of Medicine, Head of Dept. Internal Medicine, St. Louis University, St. Louis, Mo.

3:00 P. M. "Diagnosis and Treatment of Gastroenterological Cases in General Practice."

Frank Smithies, M.D., Professor of Medicine, University of Ill., Chicago.

3:45 P. M. "Spinal Anesthesia."

Frank A. Kelly, M.D., Detroit.

4:30 P. M. "Injection Treatment of Varicose Veins."

Virgil S. Counseller, M.D., Mayo Clinic, Rochester, Minn.

MINUTES OF A SPECIAL MEETING OF THE COUNCIL

Held in Ann Arbor May 16, 1930, at 5:00 P. M.

A special meeting of the Council was called to order by Chairman Stone with the following Councilors present:

R. C. Stone, Chairman; B. H. Van Leuven; B. R. Corbus; J. D. Bruce; C. E. Boys; T. F. Heavenrich; J. Powers; B. F. Green; H. Cook; O. L. Ricker; J. H. Charters; G. L. Le Fevre; J. D. Brook, President; F. C. Warnshuis, Secretary.

The Secretary imparted the details of arrangements that have been made at Benton

Harbor and St. Joe for our coming annual meeting. On motion of Bruce-Boys the report of the Secretary was approved and he was instructed to perfect arrangements as outlined.

Discussion was engaged in as to what should constitute the program for the first General Session. Upon motion of Corbus-Charters the inviting of speakers for that program was left to the discretion of the President and an appropriation of not more than \$150.00 was made to defray the expenses of invited speakers.

The Secretary presented the first volume of the Medical History of Michigan that just came off the press. He reported further that the first volume would be distributed to the subscribers within a week. On motion of Heavenrich-Boys, the Secretary was authorized to make an advance payment of \$1,500.00 to the Bruce Publishing Company on the account of the history publishing expense.

The Secretary presented several communications of representative men of Wayne County endorsing Dr. Burt U. Estabrook for the office of State Commissioner of Health, and requesting that the Council convey the endorsement of the profession of the state to the Governor and urge Dr. Estabrook's appointment. After considerable discussion it was moved by Heavenrich-Powers, as an amended motion, that the matter be referred to a special committee of three of the Council who were instructed to investigate the qualifications of all possible candidates for this position, and at the conclusion of their investigations to report their findings to the Governor. This motion was carried.

Upon motion of Green-Van Leuven, the minutes of the Executive Committee, as published in the Journal, were approved and made part of the minutes of the Council.

Upon motion of Heavenrich-Le Fevre, the Secretary was instructed to reimburse Dr. Town for expenses incurred in connection with lectures given under the auspices of the Joint Committee on Public Health Education, and that the Council reaffirm its former action that members of the Michigan State Medical Society participating in this course shall have fifty per cent of their actual traveling expenses reimbursed to them, and that W. D. Henderson, the director of the Extension Bureau, be so informed.

Upon motion of Corbus-Boys, the Secretary was directed to secure informative literature upon medical practice and medical licensure and present the same to the Executive Committee of the Council, who are authorized to select the material that will be most satisfactory and cause its distribution to be made in accordance with the recommendation of the legislative conference.

The Council then engaged in somewhat extensive discussions of the legislative problems that confront the people of Michigan and reviewed the expression made at the conference held earlier in the afternoon and reached a general understanding as to what our legislative policy should be and directed that same be imparted to the legislative committees of several county societies for their guidance.

The Council adjourned at 7:00 P. M.

F. C. WARNSHUIS,
Secretary.

MINUTES OF THE MEETING OF THE LEGISLATIVE COMMITTEE IN JOINT CONFERENCE WITH REPRESENTATIVES FROM COUNTY MEDICAL SOCIETIES

Held in Ann Arbor at the Michigan Union
at 2:00 P. M., May 16, 1930

Approximately twenty-five representatives from several county societies met with the Chairman and Legislative Committee of the State Society. The meeting was called to order by Chairman Sundwall, who presented in detail the report of the investigations and activities of the Legislative Committee and set up a tentative program that should be the aim of the profession in Michigan in protecting the health interest of the people of this state.

Upon the conclusion of the Chairman's report of the committee a general discussion of the legislative problems and policies were engaged in by all those present.

At the conclusion of the discussion it was moved by Dr. Whittaker, Chairman of the Legislative Committee of Wayne County Society, and supported by several:

1. That this conference endorse in general the work of the Legislative Committee, and the investigations and studies that they have made, and that the same be continued and presented for further consideration at a meeting in September to be held in connec-

tion with the Annual Meeting of the State Society.

2. That county societies be urged to formulate strong legislative committees that will be active and who will endeavor to obtain and maintain an intimate contact with candidates and legislators along the lines of the plan that is now in vogue in Wayne County.

3. That the Council be requested to instruct the State Secretary to prepare informative literature and to conduct an educational campaign directed towards those who will be members of the coming legislature. After some discussion the motion was adopted and the meeting adjourned at 4:45 P. M.

JOHN SUNDWALL,
Chairman.
F. C. WARNSHUIS,
Secretary.

COUNTY SOCIETIES

BERRIEN COUNTY

The Berrien County Society held their April meeting at the Hotel Whitcomb in St. Joseph on Wednesday evening, the sixteenth. There were about forty present at the dinner and program.

At a short business meeting the membership committee reported favorably on the names of Dr. Gordon Rice of Watervliet, Dr. Clayton Emery of St. Joe and Dr. Paul Hanna of St. Joe. On vote of the Society these men were then admitted to membership.

Dr. J. D. Brook, President of the State Society, presented a paper on "Rendering Preventative Medicine to the Public," taking for the main theme of his paper the immunization to diphtheria. The subject was rather extensively discussed with particular stress on the various methods and ways of administering such treatment to the public. Dr. Brook's choice of subject was well chosen, and presented from the viewpoint of the general practitioner in his duty to the public and his own patients. As we have mentioned, the response of the discussants showed the topic to be one of vital interest.

Dr. Fred C. Warnshuis presented a paper on "Practical Procedures in Head Injuries." Most of us find it difficult to disconnect the doctor from his job as Secretary of the State Society and subjects of administration, and to have him present a subject of this type and in the manner in which we all like, brief, practical and devoid of "hoocy," is indeed a revelation. Practical procedures are what the average practitioner is looking for and to have a paper which avoids theories and expresses proven methods that are within the reach of every doctor should be the aim of every county medical society.

Following his scientific talk Dr. Warnshuis addressed the local committees for the state meeting to be held in September and gave instructions, as to their duties.

The Women's Auxiliary held a meeting in the lobby of the hotel during the meeting of the county society and made their final arrangements and committee appointments for the convention.

They have planned luncheons, bridge, and theater parties besides a boat ride on the lake and a style show to be put on by one of the exclusive shops for women. Visiting women will be entertained at all times so that none will have to depend on their husbands at any time during the meeting.

The May meeting will be held as a joint session with the Cass County Society and will probably be held in Dowagiac the latter part of the month.

W. C. ELLET, *Secretary.*

LENAWEE COUNTY

The regular meeting of the Lenawee County Medical Society was held at the Adrian City Club on the evening of April 17. Dinner was served at six-thirty, after which the members and guests retired to the lecture room where President Marsh called the meeting to order. Sixteen members were present. The program commenced with the presentation by Dr. Marsh of the report of a case of Hemorrhage of the New-Born, with a short description of the disease and the treatment. His patient recovered after repeated injections subcutaneously and intramuscularly of whole blood, though the child's condition was extremely critical for some time.

This was followed by a case report by Dr. Hamel, of Tecumseh, of an undiagnosed obstruction to delivery. The mass came down between the vagina and rectum during the pains and receded between them. Puncture through the rectum showed that the mass was apparently subperitoneal and had the consistency of a sebaceous cyst. As soon as a pint and a half of this material was evacuated, delivery was accomplished in a short time.

Dr. A. C. Furstenberg of Ann Arbor was then introduced as the speaker of the evening. He talked on "Acute Infections of the Pharynx, Neck, and Mediastinum." He showed some beautiful slides made from serial cross sections of the neck, depicting the anatomy of the neck at various levels. Other slides demonstrated the distribution of the layers of the deep cervical fascia and their prolongations into the mediastinum, these layers determining the course of spread of infections from their origin to their final termination. His talk made it very plain where the incision should be made in peritonsillar and post-pharyngeal abscess. In closing, the speaker demonstrated by slides his method of opening mediastinal abscesses by anterior incision of the neck on the right side to avoid the mediastinal vessels, aspirating the pus by suction, and permanent drainage through a drainage tube.

C. H. WESTGATE, *Secretary.*

GRATIOT-ISABELLA-CLARE COUNTY

The April meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright House, Alma, Thursday, April 17, with seventeen members and four visitors present for dinner.

The minutes of the previous meeting were read and approved; announcements of future meetings were made.

President Budge then introduced Dr. R. C. Jamieson, Professor of Dermatology in the Detroit College of Medicine, who conducted a skin clinic, using the patients the members brought for demonstration.

Doctor Jamieson went into the diagnosis and treatment of each patient thoroughly, answering many questions and talking altogether nearly two hours.

A rising vote of thanks was given Doctor Jamieson.
Meeting adjourned.
E. M. HIGHFIELD, M.D., *Secretary.*

ST. JOSEPH COUNTY

The St. Joseph County Medical Society held their April meeting on the sixteenth at the Harvey Hotel in Constantine.

Despite the stormy night there was an excellent turnout.

The committee on indigent cases, composed of Dr. Kane of Sturgis and Dr. O'Dell of Three Rivers, asked to have an extension of time for completing their work. The time was extended to the May meeting.

The scientific program consisted in a differential and clinical diagnosis of a Massachusetts General Hospital case by each member. These histories were mailed to each member one week prior to the meeting, thereby allowing him plenty of time to familiarize himself with the physical and laboratory findings.

The case, one of tuberculous meningitis, miliary tuberculosis, and Addison's disease, was successfully diagnosed by nearly every member. The discussion brought out many of the newer laboratory procedures, and was so stimulating to better and more careful work that it was suggested by Dr. Kane and unanimously carried that the next meeting be spent in the same manner.

We suggest that other societies devote a meeting in this manner. We know that everyone will be just as enthusiastic as we are after such a meeting has been held.

It was moved by Dr. Morris, seconded by Dr. Kane, that the next meeting be held in Centreville, Thursday, May 15. Motion carried. Meeting adjourned.

R. A. SPRINGER, M.D., *Secretary*.

MONROE COUNTY

Monroe County Medical Society met at the Park Hotel, Monroe, April 17. Dr. Frederick A. Collier, Professor of Surgery, University of Michigan, gave an illustrated lecture on goiter. He emphasized especially the distribution of goiter in Michigan and the types of goiter found here. The discussion was greatly appreciated by all present.

FLORENCE AMES, M.D., *Secretary*.

OAKLAND COUNTY

The monthly meeting of the Oakland County Medical Society was held at the Board of Commerce, Pontiac, on Wednesday, April 23, 1930. This meeting had been designated as "Ladies' Night" and more than forty couples were in attendance.

Following dinner the meeting was called to order by the President.

The reading of the minutes of the previous meeting was omitted.

The Secretary called attention to the fact that he had written to Dr. Warnhuis in an effort to obtain a reduction in price for the purchase of a quantity of the Medical Histories of Michigan but that he was unable to make any other arrangement as to price and, in view of the fact that the book is to go to press within a very few weeks, urged that action be taken without delay. It was moved by Dr. Robert Baker that the Secretary be authorized to order six copies of "The Medical History of Michigan" and that after they have been suitably inscribed they are to be presented to the Public Libraries in Pontiac, Birmingham, Royal Oak, Ferndale, Rochester, and Milford. Supported. Carried.

The President introduced Dr. B. T. Larson, Chairman of the Program Committee, who in turn introduced Dr. L. A. Farnham, recently elected mayor of the city of Pontiac. He thanked the doctors and

their wives for the work they had done during the recent political campaign in Pontiac. He stated that no one factor had as much to do in changing public opinion as the activities of the doctors and their families.

In introducing Dr. Kiefer, Dr. Farnham stated that the guest of honor and his father, the late Dr. Herman Kiefer, were men of no small distinction in the medical world. He told of the many things Dr. Kiefer has done in connection with organized medicine, that through his efforts the medical profession has gradually been drawn together, and that no one in Michigan has done more in recent years to cement the various factions of medicine. Prior to Dr. Kiefer's appointment as State Health Commissioner, between the Michigan Department of Health and the medical profession of the state a breach had developed which showed a tendency to become wider. Through the efforts of Dr. Kiefer this feeling is gradually being wiped out. The medical profession can get whatever they want if they will get together and work for it.

Dr. Kiefer concurred in the statement made by Dr. Farnham that difficulties had existed between the doctors of medicine and certain public health departments, and if it had gone on it would undoubtedly have led to state medicine.

It is the duty of all health departments to educate the public regarding the measures available for the prevention of disease and the promotion of health, and after a health department has demonstrated the value of a procedure, the people should go to their private physicians for the preventive work.

The Michigan Department of Health functions to help the local health departments in the education of the public.

Dr. Kiefer was the first to establish a baby clinic in Detroit, the aim of the organizers being to educate the people to keep the babies well.

Dr. Kiefer stated that every child should be vaccinated against smallpox at birth, that they should be immunized against diphtheria at nine months, followed by immunization against scarlet fever and typhoid fever.

The health departments don't want to do this work and shouldn't do it. When smallpox threatens those attending some school, the health department can go into the school and clean up the situation by vaccinating all exposures, but the better plan would be to have the work done by the family physician at a time when there was no thought of an outbreak.

He stressed the need for periodic health examinations. (Yearly.)

How are we going to get the people to present themselves for these preventive treatments? The answer is right around this table. The women can get them. If you visit the women's clubs, you will find that the most common topic of discussion is doctors and operations, and when such subjects come up it gives the women of this group a splendid opportunity to campaign and tell the world that the doctor can do it.

Why are the people attracted to the cultists? Because the cultist is continually telling of what he claims he can do.

The doctors are too modest. They should not hesitate to tell the people what they can do.

If the doctors of Michigan will help me in establishing this policy, there will be no further danger of state medicine.

Don't pooh-pooh the idea that the doctor can't do this work in preventive medicine because all can do it if they will only take hold of the problem.

In a discussion of the reduction in maternal mortality in Michigan, he stated that a majority of the women dying from childbirth had not had pre-natal care.

Dr. Larson extended the thanks of the Society to Dr. Kiefer for his interesting and enlightening address and introduced Mrs. Guy L. Kiefer.

She told of the pleasure it had given her to be invited to the meeting and that as a rule she had to seek the invitation and sometimes she had been turned down cold. She spoke of having had the pleasure of assisting in drawing up the constitution and by-laws in the organizing of the Woman's Auxiliary of the Michigan State Medical Society at Mackinac Island in 1927.

Mrs. Kiefer served as president for two years and was recently appointed Chairman of the Extension Committee, a committee having for its object the establishment of county auxiliaries.

She stated that the object of the society is to extend the aims of the medical profession through the wives of doctors to other organizations which look to the advancement of health and education. To assist in entertaining at all Michigan State Medical Society Conventions, to promote acquaintanceship among doctors' families that closer fellowship may exist, and do such work as may be assigned from time to time, by the Michigan State Medical Society and the County Society.

County Auxiliaries have been formed in the following counties: Bay, Calhoun, Barry, Ingham, Jackson, Kalamazoo, Saginaw, and Wayne.

She called attention to the fact that the annual meeting of the American Medical Association would be held in Detroit in June, when the National Woman's Auxiliary meeting would be held, and the State meeting to be held at Benton Harbor in September.

Mrs. Kiefer stated that one of the greatest privileges in the world was that of being a doctor's wife, that the greatest help-mate to a physician was his wife, and in an amusing way told of many incidents that tended to develop a wonderful amount of patience in a doctor's wife.

In closing Mrs. Kiefer made a plea for the early organization of a Woman's Auxiliary in Oakland County.

The President appointed the following committee to formulate plans for such an organization: Mrs. J. E. Church, Chairman; Mrs. L. A. Farnham, Mrs. D. G. Castell, Mrs. F. A. Mercer, Mrs. H. A. St. John, Mrs. B. M. Mitchell.

The ladies held a short meeting following the close of the regular meeting and voted unanimously to form a Society. The Committee will call a meeting later for the election of officers and adoption of a constitution and by-laws.

The President announced that the next meeting to be held on May 15 would be a joint meeting with the Oakland County Dental Society. The speakers will be Dr. J. G. R. Manwaring of Flint and Dr. C. J. Lyons, of the University of Michigan Dental School, Ann Arbor. They will discuss "Focal Infections."

There being no further business, the meeting adjourned.

MARCH MEETING

The monthly meeting of the Oakland County Medical Society was held at the Board of Commerce, Pontiac, on Thursday, March 20, 1930.

The Board of Directors submitted a report on the offer of the Riker Building, Pontiac, to provide space in that building for the Society to use as a Library or Club Room at a cost of \$1.00 per year. The Board recommended that, inasmuch as the Society is contemplating a large expenditure during 1931 in connection with the holding of the State Medical Meeting in Pontiac, the Board of Directors do not feel it advisable to take on the additional obligations that would follow should the Society accept this offer and for this reason the Board

would recommend to the Society that the offer be declined with thanks.

It was moved by Dr. Ekelund that the recommendation of the Board of Directors be accepted. Supported. Carried.

The Secretary read a communication from Dr. Sherman relatives to the plans of the Oakland County Tuberculosis Association in regard to the free chest clinics which the Society proposes to hold in the near future. Dr. Sherman stated that he had prepared a letter to the physicians of the county at the request of Mrs. Hale, Executive Secretary of the Society. It was their aim to bring about closer co-operation and personal contact between the physicians of the County and the physicians in charge of the clinics.

Dr. Larson, Chairman of the Program Committee, introduced Mr. M. M. Ricketts, who briefly outlined the motion pictures that were to be shown. The first picture shown was a complete dissection of the abdominal wall which had been made by Dr. H. T. Windle, Professor at Northwestern University. The second film was a demonstration of the action of cholecystokinin on the gall bladder.

The pictures were discussed by Doctors Sherman, R. H. Baker, and Church.

The Society extended a vote of thanks to Mr. Ricketts for the showing of the interesting pictures.

Dr. Larson stated that the Program Committee were planning to have a "ladies' night" for the next meeting, when it was hoped that a woman's auxiliary might be organized. He requested suggestions from the members. It was suggested that the Society secure a speaker for the proposed meeting who would be familiar with the organization of auxiliaries and the names of Dr. and Mrs. Guy L. Kiefer were suggested. Mrs. Kiefer was formerly president of the State Woman's auxiliary and has been very active in the extension of the work.

Dr. Murtha reporting for the Bulletin Committee stated that the Committee was anxious to receive news items for the "Bulletin" from all around the County and requested the coöperation of all of the members. He stated that any original articles or ideas and editorials could be used.

C. A. NEAFIE, M.D., *Secretary*.

CALHOUN COUNTY

The April meeting of the Calhoun County Medical Society was held at the American Legion Hospital, April 1, 1930. Through the kindness of Dr. R. H. Lambert, members, to the number of fifty, enjoyed the dinner provided for them, and a vote of thanks was extended to him for the generous invitation to meet at the Legion Hospital and for the bountiful dinner.

The business session of the Society was called in the assembly room. Bills were ordered paid as follows:

Secretary's office.....	\$5.60
Vandervoort—Flowers	8.00
Expense for exhibit	6.00

An invitation to hold the May meeting in Albion was extended by Dr. Herner, and the program committee notified to prepare program accordingly.

The first speaker on the program, Dr. F. C. Kidner, of Detroit, was introduced, and spoke on the general subject of bone tuberculosis. In spite of the diminishing number of bone tuberculosis cases found today as compared with twenty years ago, this subject remains one of the greatest interest and importance. Tubercular bones seem to be disappearing as a result of state control of milk supply, and gradually, what used to be the bone surgeon's chief source of income, is being cut off. Bone tuberculosis is usually not diagnosed the first

six months of its existence, and cases seem unusually well advanced. In hip joint disease the referred pain in the knee is a common cause of mistaken diagnosis. Early diagnosis and treatment prevents deformity. Advanced tuberculosis joint disease never recovers unless joint is put at permanent rest by arthrodesis. Positive diagnosis of diseased joint cannot be made without biopsy. Early tuberculosis of bone is not visible with X-ray, and diagnosis cannot be made without guinea pig inoculation. Cures do not come except by permanent fixation, which should not be done in young children on account of interference with bone growth, except the hip, which can be fixed by various methods of bone graft. In spine tuberculosis in children the cure is about equally certain by surgery or recumbency. Casts to relieve pressure on spine do not relieve, but recumbency on a frame does. In adults, tuberculosis of the spine should be operated as early as possible. His talk was illustrated with some well chosen slides, and with a moving picture reel showing functional results in operated cases.

The discussion was taken part in by Drs. Brainard, Gubbins and Knapp.

Dr. Walter H. Sawyer was introduced as the second speaker in the program. His paper was read and will appear shortly, probably in the Journal of the State Society. His talk was delightfully received, and made everyone feel that his comprehension of the broad scope of medicine and medical economics was timely.

The meeting adjourned. Members present, 60.

HARRY B. KNAPP, *Secretary*.

JACKSON COUNTY

The April meeting of the Jackson County Medical Society was held on Tuesday evening, April 15, 1930, at the Hayes Hotel. Following the dinner President Cooley called the meeting to order.

The minutes of the previous meeting were approved as published in the Bulletin. The Secretary read a communication from Dr. Frank A. Poole of Lansing relative to the meeting of the Michigan Association of Industrial Surgeons to be held in Flint on April 25, 1930. He also read the program of this meeting and urged all who could to attend the meeting.

President Cooley then turned the meeting over to Dr. Riley, chairman for the day. Dr. Riley introduced Dr. Poppin of Reading, who is president of the Hillsdale County Society, and Dr. B. F. Greene of Hillsdale, who is councillor for this district. Dr. Greene told us in his remarks that the new Ingham County Medical Society had great promise of taking Jackson's place as the leading medical society in this district.

Dr. Riley then introduced Dr. A. H. Whittaker of Detroit. Dr. Whittaker gave a short talk on the public health situation as it existed in Wayne County prior to 1928. He covered the use and abuse of free clinics, and told of the changes brought about in the Wayne County Society which were necessary to correct the existing evils.

Dr. L. O. Geib was then introduced. Dr. Geib gave a very splendid discussion of the present system in Detroit. He told how the changes were brought about and how their new system functions at the present time. He quoted statistics from the Health Department Bulletin of the City of Detroit which proved the greatly increased effectiveness of the new system. He stressed greatly the need for active co-operation of the newspapers and also the need of an advisory committee from the Medical Society to work with the Commissioner of Health.

There was considerable discussion of the project by a number of the doctors present. A motion by Dr. Finton that a committee be appointed to put

this system into operation in Jackson was passed. President Cooley appointed the following committee: Chairman, Dr. Clark; Dr. Town, Dr. Lewis, Dr. McGarvey, Dr. Finton, Dr. Schmidt, Dr. F. Van Schoick. Dr. Geib closed the discussion.

Dr. Town read a communication from the district nurses' association protesting against the management and supervision of the contagious hospitals by non-graduate nurses. On motion of Dr. Brown, which was passed, this matter was referred to a committee who would bring it up at a later date. President Cooley appointed Drs. Brown and Hurley to take care of the situation. No further business to come before the Society, the meeting adjourned. Attendance forty-seven.

HILLSDALE COUNTY

The Hillsdale County Medical Society met at the Country Club, Hillsdale, Tuesday, May 6th, at 6:30 P. M., the President, Dr. Poppen, in the chair.

After the dinner and the reading of the minutes of the last meeting, the President introduced the speaker of the evening, Dr. F. C. Warnshuis, Secretary of the Michigan State Medical Society, who addressed the meeting on "Practical Procedures in the Treatment of Head Injuries." The Doctor divided these injuries into three principal classes—first, the extremely serious ones which will inevitably die; second, those of moderate severity which require little treatment but rest; and a third or intermediate class of varying degree between the other two. Dr. Warnshuis paid most of his attention to this class of injuries, advising careful diagnosis by all means in our power before resorting to radical surgical intervention. He advocated closer attention to the condition of the *brain* rather than to *fracture of the skull* unless the latter be *depressed*, giving careful attention, meeting conditions as they arise, and deplored hasty and ill considered surgery.

The doctor's address was closely followed by the members present, and fully discussed, a number of questions being asked which he answered.

Dr. Warnshuis then spoke on the topic of "Organized Activities"—taking up some of the more important problems of the profession, especially the legislative, and gave some of his experiences in that field.

He was given a rising vote of thanks for his timely and instructive addresses.

It is most unfortunate that so many of our members were not present to hear these subjects so ably and clearly presented.

A goodly number of members were present from the Branch County Society, among whom were Dr. Schultz, Pres., Drs. Wade, Culver and Williams of Coldwater, Dr. Far of Quincy, and others. A number were also present from the Lenawee County Society, including Dr. W. G. B. Marsh of Tecumseh, President, Dr. C. H. Westgate of Morenci, Secretary, and others.

All these visiting physicians took part in the discussion.

Discussing the question of the administration of toxin-antitoxin and smallpox vaccination, it was moved, supported and carried, "That the President appoint a committee of five to confer with Mrs. Barnstead, county nurse, and endeavor to work out a plan to promote these most necessary measures to the fullest extent and with justice to all."

Adjourned.

D. W. FENTON, *Secretary*.

COUNTY SOCIETY ACTIVITIES: County secretaries are urged to send reports of county meetings and activities to the state secretary for publication in the Journal.

**WOMAN'S AUXILIARY, MICHIGAN
STATE MEDICAL SOCIETY**

MRS L. J. HARRIS, President, Jackson, Mich.
MRS. J. EARL McINTYRE, Secretary, Lansing, Mich.

Jackson, Michigan.
April 29, 1930.

My dear Mrs. Urmston:

Your letter to Mrs. McIntyre accepting the appointment as State Auxiliary editor was forwarded to me and received a few minutes ago. I am very glad to hear favorably from you and to know that you will continue with State work. It is so much better for some one who knows something of the work, as you do, and I'm sure that you will make a success of our page. Last winter when, during the absence of everybody, I acted as State secretary, treasurer and editor, I realized that an editor would be desirable. Dr. Warnshuis was fine and very patient, but it will be so much more business-like to have one person responsible for the material and to have it in on time.

Speaking of that: that is the reason I am writing so hurriedly now. I am inclosing that program for the National meeting which you might send in. I will see Mrs. McIntyre Thursday, but rather than wait till then, I should take it for granted that she had done nothing about the page, write that "at the April board meeting held at the Statler in Detroit" you were appointed to this office and would greatly appreciate the coöperation of the societies in reporting their work, any special activities or items of interest. We want no one to say that "they know nothing of work in the State." Stress the importance to Michigan members of attending the Convention. They are planning for the entertainment of hundreds of women outside of the regular business meetings. A "style show" by Hudson's, a visit to Cranbrook, to the Ford airport and various other pleasant diversions are part of the tentative plans. Mrs. Burt Shurly and a large capable committee are working on the social activities, while Mrs. Basil Connolly and committee have the responsibility of the local executive arrangements.

State and National dues to date have been received from the following counties: Bav. Calhoun, Ingham, Jackson, Kalamazoo and Wayne. For payment of dues, please refer to By-laws of Women's Auxiliary to the

Michigan State Medical Society, also National constitution and by-laws.

Dr. Warnshuis may not be able to give you room for all this material, but I would like very much to have it if possible.

Anything I can do I shall be glad to, but you are the Head-line Hunter from now on.

Most sincerely and hurriedly,
(Mrs. L. J.) MABEL HOUGHTON HARRIS,
607 Washington Ave.

NATIONAL MEETING, DETROIT

Monday, June 23, 1930.

2:30 P.M. Meeting of the Board of Directors—Statler Hotel.

All state presidents and presidents-elect are asked to time their arrival and stay in Detroit so as to be able to attend the Pre-Convention and Post-Convention Board Meetings.

Tuesday, June 24.

9:00 A.M. Registration. Auxiliary Headquarters—Hotel Tuller.

9:30 A.M. Business Meeting.

Invocation.

Address of Welcome.

Response.

Report of Committee of Arrangements; Announcements.

Report of Entertainment Committee.

Adoption of Convention Rules.

Minutes of Seventh Annual Meeting.

Treasurer's Report.

Auditor's Report.

President's Report.

Committee Reports:

Finance. Presentation of the Budget.

Printing.

Organization.

Press and Publicity.

Hygeia.

Public Relations.

Legislation.

Program.

Revisions.

Historian.

New Business.

1:00 P.M. Luncheon, Hotel Tuller Roof Garden.

Speakers will be announced later.

Wednesday, June 25.

9:00 A.M. Registration—Hotel Tuller.

10:00 A.M. A WORKERS' CONFERENCE.

The Purpose of the Auxiliary.

The National Program.

Analysis of the Work of State Auxiliaries on the Basis of the Official Program of the National Auxiliary. Conducted by Mrs. Evarts V. De Pew, assisted by all State Presidents.

This discussion is planned to be a workers' conference in the real sense of the word. The discussion will be interesting and exhilarating to any doctor's wife; but it should be especially valuable to state presidents, presidents-elect, and committee chairmen, and to the corresponding county officers.

Business Meeting Continued.

Unfinished Business.

New Business.

Report of Credentials Committee.

Report of Nominating Committee.

Election of Officers.

Adjournment, sine die.

Thursday, June 26. Mrs. J. Newton Hunsberger, presiding.

9:00 A. M. Post Convention Board Meeting.

All state presidents and presidents-elect should be at this meeting to assist the incoming president in planning the work of 1930-1931.

10:00 A. M. Round Table for State Presidents and Committee Chairmen.

Chief Purposes of the State Annual Meeting.

Adequate Preparation for the State Meeting.

Agenda for the State Meeting.

Duties of State Board Members, Especially of the President and Committee Chairmen.

WOMAN'S AUXILIARY TO OAKLAND COUNTY MEDICAL SOCIETY

Organization of an auxiliary of the Oakland County Medical Society was begun following a business meeting and dinner-dance of the physicians and their wives at the Board of Commerce Wednesday evening, April 30. Guest speakers were Dr. and Mrs. Guy L. Kiefer, the former being state health commissioner.

The following auxiliary planning committee was appointed: Mrs. J. E. Church, chairman; Mrs. L. A. Farnham, Mrs. D. G. Castell, Mrs. F. A. Mercer, Mrs. H. A. St. John and Mrs. B. M. Mitchell.

In the near future the committee will call a membership meeting for the adoption of a constitution and election.

The action followed an address by Mrs. Kiefer in which she told of the organization of auxiliaries in Bay, Calhoun, Barry, Ingham, Jackson, Kalamazoo, Saginaw and Wayne counties. For two years Mrs. Kiefer served as president of the auxiliary of the Michigan State Medical society.

In a previous address Dr. Kiefer declared it was the duty of all health departments to educate the public regarding measures available for the prevention of disease and the promotion of health. He added that after the department demonstrates the value of the procedure the people should go to their private physician.

Dr. Kiefer was introduced by Dr. L. A. Farnham. Dr. B. T. Larson was program chairman. Dr. B. M. Mitchell, president of the society, announced a joint meeting with the Oakland County Dental society May 15. Speakers will be Dr. J. G. R. Manwaring of Flint and Dr. C. J. Lyons of the University of Michigan Dental School.

The dinner dance was attended by forty-five couples.

To elect and install officers of the newly organized Women's Auxiliary of the Oakland County Medical society, a group of about 50 wives of doctors met for luncheon Thursday, May 1, at the City Hospital.

Mrs. Frank A. Mercer was chosen president, and other officers are Mrs. H. C. Guillot, first vice president; Mrs. Robert H. Baker, second vice president; Mrs. George A. Sherman, third vice president; Mrs. Hubert M. Heitsch, secretary; and Mrs. C. R. Aschenbrenner of Farmington, treasurer.

Mrs. J. Eugene Church acted as chairman in charge of the luncheon and meeting, and was assisted by Mrs. L. A. Farnham, Mrs. B. M. Mitchell, Mrs. D. G. Castell, Mrs. Harold A. St. John and Mrs. Mercer. Bouquets of spring flowers in pastel colors were used to adorn the long luncheon tables in the hospital dining room.

After the election, the aims of the medical association and auxiliary were read. Plans for future meetings will be made by the executive committee, which will announce further arrangements and call meetings.

Members were present from Pontiac, Farmington, Royal Oak, Rochester and Milford.

OF GENERAL MEDICAL AND SURGICAL INTEREST

CONTROL OF IMMEDIATE SHOCK FOLLOWING HYPODERMIC MEDICATION

Stanley W. Insley, Detroit, found that the application of pressure the moment any patient shows signs of a general reaction is effective in the control of shock as a complication of immunizing therapy. He reports two illustrative cases. The blood pressure cuff is applied just proximal to the injection area. The pressure need not necessarily be sufficient to cut off the arterial flow. It should be sufficient to cut off not only venous return but also lymphatic seepage. Insley gages the practical amount of pressure required to slow up absorption satisfactorily, and the length of time following such application of pressure that symptomatic changes might be expected. The routine order of applying pressure of from 100 to 120 mm. of mercury is satisfactory. After two minutes this is lowered to 80 mm. It is dropped to 60 mm. four minutes later. The pressure may be maintained, lowered or raised from this figure in conformity with the patient's reactions. The continued partial blocking at this pressure seems sufficient for the average individual given an injection in the arm. The total length of time that any pressure need be maintained is rarely more than sixty minutes. The average total time for compression has been thirty minutes. An attempt was made to determine the length of time necessary for the therapeutic benefit of such pressure to manifest itself. The average time for a change of symptoms, with pollen, animal emanation, orris root and epinephrine, varied between thirty and sixty seconds. Insley is using a blood pressure cuff for the control of absorption in all pollen, animal emanation, specific protein and serum inoculations.—Journal A. M. A.

FOLLOW-UP STUDY OF HYPERTENSION

A study made by John M. Blackford, James M. Bowers and Joel W. Baker, Seattle (1930), of 401 hypertensive patients (systolic pressure 175 or over) found in 10,000 clinical examinations made in a general clinic from five to eleven and one-half years ago has shown that: 1. The appreciable incidence (1.2 per cent) of hypertension begins in the fourth decade; 5.8 per cent of all patients examined in the fifth decade showed hypertension; 12.3 per cent in the sixth, 22.5 per cent in the seventh, 14 per cent in the eighth, and 10 per cent in the ninth showed blood pressures above 175. 2. Sixty-five per cent of the hypertensive cases in this series are in women; 50 per cent of all patients examined were women. 3. The remarkably greater number of women having hypertension, as compared with men, comes in the fifth, sixth and seventh decades. 4. Family histories of hypertension were noted in more than one-third of all histories. 5. Case of hypertensive disease complicated by goiter, syphilis, diabetes, chronic nephritis and valvular heart disease have each shown by groups no particular difference from cases of pure hypertension. A follow-up study of 222 of 401 hypertensive patients (55 per cent) examined from five to eleven and one-half years ago has been made. Twenty of these have been discarded for statistical study because they were moribund at the time of examination or died shortly afterward from other diseases. The 202 cases remaining, followed from five to eleven and one-half years, have shown: 1. A gross mortality of 50 per cent, a male mortality of 70 per cent and a female mortality of 39 per cent. 2. A mortality about the same for moderate and marked cases, but twice

as high in extreme cases. 3. An average duration of life after the first observation of thirty-two months for males and forty-four months for females. 4. An average time since the first examination of 101 living patients of eighty-one months. 5. Known causes of death, thirty-one from cerebral complications, twenty-five from heart disease, eighteen from uremia. Blackford et al. have not found any tendency toward recovery in hypertension. Occasionally remarkable exceptions are seen to the general rule of mortality. Women with hypertension sometimes outlive their expectancy. Men almost never do.—*Journal A. M. A.*

CONGRESS PASSES BILL TO REORGANIZE HEALTH SERVICE

A bill for the reorganization of the U. S. Public Health Service has just passed both houses of Congress. Another bill has just been passed by the Senate, but has not yet been passed by the House, providing for the creation of a National Institute of Health, which would greatly expand the facilities for health work by the U. S. Public Health Service. A system of fellowships and provision for accepting donations for special work, such as research work on cancer, is a part of this National Health Institute plan.

The Jones bill, which now goes before the President, provides for putting the federal health service on a basis which will make it one of the best public health services in the world. The bill aims to put all the public health work of the government departments under one large, coordinated management as well as to increase the number and kind of commissioned public health officers.

During the last Congress a bill was passed by both houses which provided for such coordination, but it was vetoed by the President on certain constitutional grounds. Strong prejudice was expressed also by President Coolidge at that time against certain features of the bill which he called "militarization" of governmental professional and scientific employees.

"Permanency of appointment of those engaged in professional and scientific work," he said, "I do not believe necessary for progress or accomplishment in these activities."

It is believed that the new bill has eliminated all the former executive's objections.

Among the provisions of this bill are:

1. That whenever some branch of the government wishes to carry on a public health activity, the Secretary of the Treasury shall detail officers and employees from the Public Health Service to cooperate and direct the work.

2. Whenever special health problems should be studied and certain research or educational institutions have facilities for this study, the Surgeon General may detail health officials and scientists from his staff to take up their quarters in such laboratories and work there.

3. Great expansion of the Hygienic Laboratory in the District of Columbia.

4. Great increases in personnel under certain conditions. A total of fifty-five officers to be appointed by the President—medical, dental, sanitary engineer, pharmacist officers—and shall be credited with service in the Public Health Service and active commissioned service in the Army and the Navy. All officers and employees other than the commissioned officers in the service shall be appointed under the civil service.

This authorization of appointment of physicians, dentists, sanitary engineers and pharmacists by the President, stated Senator Wesley Jones, sponsor of the bill, relates only to those selected for general service in the regular corps, and who are subject to changes of station.

"It is one of the major objects of the bill. Public-

health work is and should be a career service. For medical officers this has been recognized by Congress since 1889.

"The work of the medical officers, however, is quite as dependent upon these other professions for its success as upon the medical profession.

"The necessity for a mobile group of trained personnel has been particularly emphasized in recent years by the demand upon the Public Health Service in the assignment of personnel abroad or immigrant and quarantine duties and in the prevention of epidemics such as was threatened after the Mississippi floods."

Since the medical officers of the service receive their appointments from the President, members of other professions necessary for public health work must be put on the same basis as the medical officers, Senator Jones believes.

The new bill would put the Surgeon General of the Public Health Service on a par financially with the Surgeon General of the Army, increasing his pay to \$9,700.

A Senate sub-committee will probably report to Congress soon on the kind of help which the United States could give to cancer research, and is expected to recommend certain amounts of money which the government should make constantly available for this work.—*Science Service.*

THE PATIENT

Walter S. Goodale, Buffalo, discusses, first, the initial disappointments of the patient caused through delay in securing proper medical care after entering the hospital; second, the unalterable house diet and the fixed hours for meals; third, objectionable smells and sounds; fourth, restrictions on visitors; fifth, delayed nursing service; sixth, the tediousness of convalescence. Speaking of the physical examination, he says: It may be that the question "What is a complete physical examination?" now begins to formulate itself in the patient's mind. Over the radio he has heard members of the county medical society advocate periodic physical examinations. Although he entered the hospital fourteen days before because of acute appendicitis, aside from the admission formalities and the operation nothing further has transpired. There has been no examination of the eyes, ears, nose, throat or rectum. Nor can he recall having been examined by a dentist. No one has said a word about his old sinus trouble or the hemorrhoids that have bothered him for years. All this suggests the further question, "Why are doctors so insistently recommending complete periodic physical examinations for every one, including those who are apparently well, when they appear to have neither the time nor the inclination to examine a man thoroughly and completely after he has entered the hospital with a definite illness?" Opportunities for social service, hospital facilities and administration and consideration for patients of small means are topics discussed by the author. He says: Hotels aim to please. In order to accomplish this, employees have been trained to assume the attitude that the guest is always right. This policy might be defined by unthinking persons as servility rather than service. In reality, it is the latter reduced to terms of politeness and consideration. Its effect on a guest or a patient is usually swift and sure. Insolence never yet cured insolence. Unreasonableness is not an antidote for unreasonableness. Hotels have accumulated fortunes by astutely commercializing the Biblical injunction "A soft answer turneth away wrath." Most hospitals have yet to learn this lesson. We can at least adopt the slogan that "the patient is usually right" no matter how unreasonable the demand or complaint. With this fundamental idea firmly fixed, the road leading to perfect service begins to loom ahead. Hospital attendants should maintain an inexhaustible supply of kindness, consideration and forbear-

ance ready for instant use. An aptitude for debate or a natural or cultivated taste for recrimination has no place in the armamentarium of a physician or a nurse. The individual lacking enough in the fundamentals of psychology to interpret the peevish or unreasonable complaints of a sick person as a personal insult is totally unfitted to practice the healing art or care for those distressed both in mind and in body. The first concern of a hospital should be care of the patients, with instruction running a close second. These are truly noble objectives, calling for the exercise of a rare intelligence, a boundless tolerance and an unselfish desire to serve.—*Journal A. M. A.*

METABOLIC "WASTE HEAT"

The theories with regard to the utilization of the energy of the different foodstuffs in muscular activity are experiencing some demands for revision. The assumption has been generally accepted that, while the work production—the muscular contraction—is primarily brought about by the conversion of glycogen into lactic acid, the heat production belongs to the recovery process, during which a portion of the lactic acid is oxidized and the remainder is retransformed into glycogen. The recovery processes thus referred to call for fuel. It was long believed that carbohydrate is the sole fuel of muscular contraction. Of late, however, experimental evidence has accumulated in support of the claim that this exclusive view is not universally tenable. For example, Rapport has advanced the conclusion that not only carbohydrate but also fat can provide energy for muscular exercise, the amount of each that happens to be used in a particular case depending on the proportions in which these substances are presented in available form to the muscles. If this is correct, Rapport points out, it follows that the oxidative metabolism of contracting muscle is nonspecific; that is, that the energy for the endothermic processes of recovery can be furnished by the oxidation of more than one foodstuff.

In this connection, one may recall some of the peculiarities of the influence of food on metabolism. For some time after the ingestion of food, the calorific output is greater than that observed under the familiar basal conditions. This effect of foods in stimulating metabolism so that the heat output exceeds that which would be derived by oxidation of the actual amount fed has been termed specific dynamic action. It is most pronounced for ingested proteins or for some of the amino-acids that they yield; it is exhibited in lesser degree by fats and carbohydrates. The outcome of the reactions involved has been regarded as "waste heat," on the assumption that the extra energy released as the result of the specific dynamic action of the foodstuffs cannot be used for the performance of work.

Experiments by Rapport at Western Reserve University School of Medicine, Cleveland, challenge this assumption of waste energy. He admits that when an individual is at rest the stimulation of the cells to extra energy production results in exothermic reactions, which appear as heat and as such are useless for the performance of work. In muscular exercise, however, he finds that the energy of these reactions is utilized, and since the reactions involve the consumption of oxygen it may be assumed that they are utilized in the recovery process of muscular contraction. According to Rapport the specific dynamic action of fat, as well as that of dextrose, is abolished during muscular exercise and recovery; in other words, this extra energy, which at rest appears as waste heat, is utilized as free energy in muscular work. This, he adds, tends to confirm the nonspecificity of the oxidative recovery process of muscular contraction. However, there are limits to the application of the theory. Not all exothermic reactions can serve this purpose. The

specific dynamic action of protein must still be regarded as affording "waste heat" alike during rest and during muscular activity.—*Journal A. M. A.*

THE SURGEON IN THE MAKING

Lucius E. Burch, Nashville, Tenn., asserts that the essential to be desired in the training of the young surgeon is surgical judgment. He discusses the economic difficulty of acquiring a thorough training and the best method of securing the proper training after graduation. He presents a plan that he is about to inaugurate in his own service which is as follows: After graduation a one year service in medicine should be required in every good hospital. No one can become a good surgeon unless he has received medical training, and nothing will be of greater service to him in his future life than this year in medicine. A second year of training should be spent in the department of pathology. Here the young surgeon will refresh his anatomy; the postmortems will teach him that disease often involves many organs and this, of course, will broaden his vision. This year will also give him an added stimulus for appreciating the scientific side of surgery. The third, fourth and fifth years are to be spent in the wards, laboratories and operating rooms of the department in which the student desires to specialize. This training should produce a man of broad vision and of scientific attainments, a good physician, a promising pathologist, well versed in technic, and, last, but not least, one well developed in surgical judgment.—*Journal A. M. A.*

SYMPTOMS OF VAGOTONIA AND THYMIC HYPERTROPHY

Most of the symptoms exhibited by forty patients who were of interest from the standpoint of status lymphaticus in the opinion of C. A. Aldrich, Winnetka, Illinois, can be explained on the basis of spasm of the smooth muscles under vagus control. It is considered possible that the suprarenal involution that occurs in the newly born may result in both vagotonia and thymic hypertrophy, presenting the symptom complex described. In this series irradiation over the thymus appeared effective in relieving symptoms, whether or not the gland itself was demonstrably enlarged.—*Journal A. M. A.*

CUT HOSPITAL COSTS BY USING STANDARD DRUGS

If physicians would prescribe standard drugs instead of proprietary drugs for their patients in hospitals, they would help to cut the cost of hospital care for the patients, Dr. Ernest E. Irons, dean of Rush Medical College of the University of Chicago, advised the Congress on Medical Education and Hospitals. Proprietary drugs are nearly always more expensive and yet no more effective. If a better product is sold under a trade name, the specification of that brand may be justified, but most of the trade-marked brands comply only with the fixed minimum standards of the U. S. Pharmacopeia, William Gray, Pharmacist of the Presbyterian Hospital, Chicago, explained to the same gathering. The prescribing of many brands of the same drugs causes duplication of stock and ties up money that might be used to better advantage. He named a number of drugs which under copyrighted names sell for from two to nine times as much as under their official titles.

A serious result of using drugs with widely advertised names is that patients tend to continue to use them without medical advice. Many drugs that are safe to use for short periods are dangerous if used in large doses over long periods, Dr. Irons pointed out. He told of one drug which in a number of cases had caused fatal damage to the liver when patients had taken it on their own responsibility after leaving the hospital.—*Science Service.*

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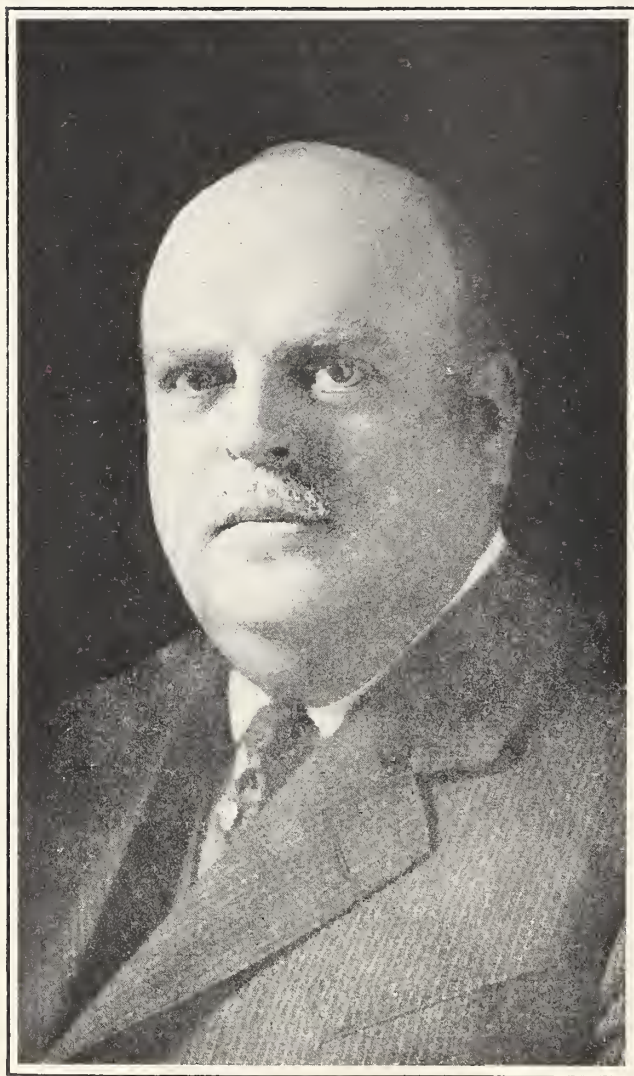
Guy Lincoln Kiefer, M.D.

Memorial Supplement

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GUY LINCOLN KIEFER, M.D.
Deceased May 8, 1930
Age 64

THE PROFESSION'S MEMORIAL TRIBUTE

TO

GUY LINCOLN KIEFER, M.D.

Not only the medical profession but the public in general were shocked to learn of the death of Doctor Guy Lincoln Kiefer. He had been so prominent in medical affairs for so long that it is difficult to write anything of his remarkable career that is not already well known, particularly to the medical profession. Doctor Kiefer may be said to have died in the harness. For a period of at least two years he had been aware of a serious, progressive disability. Upon the advice of his physician, he had been conserving his energy and so unobtrusively was this done that only his most intimate associates were able to observe any change in his activities. The morning of the day of his death was spent as usual at his desk in the Department of Health at Lansing, going to his home in Detroit in the afternoon, where he passed away suddenly and peacefully from coronary thrombosis.

Guy Lincoln Kiefer was born in Detroit, Michigan, on April 25, 1867, the son of Herman and Francisca Kiefer. He was educated at the University of Michigan, where he received his B.A. degree in 1887 and his M.A. and M.D. degrees in 1891. The honorary degree of D.P.H. was conferred upon him by his Alma Mater in 1911. His formal education was supplemented from time to time by post-graduate work which he pursued at Berlin and Vienna. He was a member of the Delta Tau Delta and Phi Rho Sigma fraternities. Doctor Kiefer was married at Toledo on May 2, 1893, to Miss Henion, who survives him. He began practising his profession in 1893. He was county physician of Wayne County in 1895 and 1896, city physician of Detroit in 1896 and 1897, and United States pension examiner from 1898 to 1901. He occupied the position of Commissioner of Health of Detroit from 1901 to 1913, when he resigned. Doctor Kiefer was chief of

staff at the Herman Kiefer Hospital for a number of years, and was also consulting physician of contagious diseases in Harper Hospital, Children's Free Hospital, and Grace Hospital, Detroit. For a number of years he was professor of preventive medicine and contagious diseases at the Detroit College of Medicine. He was also medical director of the Michigan State Telephone Company. He was a member of the American Medical Association and the Michigan State Medical Society, of which he was president in 1913 and 1914. He was also ex-president of the Wayne County Medical Society. His academic society memberships included the American Academy of Medicine, American Public Health Association, the Michigan State Health Officers' Association, of which he was at one time president. He was also a member of a number of clubs, notably Harmonie, Turnverein, and the Detroit Athletic Club. Doctor Kiefer was the last of a somewhat long lineage of physicians, his great grandfather, his grandfather and his father, Herman Kiefer, all having achieved distinction in medicine. The father came to Detroit in 1849, when it was a comparatively small town. He acquired a large practice and represented the best in medicine of his day and generation. Passing, he left a noble heritage of scientific tradition to his son, who as meritoriously carried on.

For the past four years he had been Commissioner of Health for the State of Michigan. Doctor Kiefer was preëminently an apostle of preventive medicine. He emphasized and preached preventive medicine all the time. Probably no other health officer in the United States had a better knowledge of infectious diseases. It was a treat to listen to Doctor Kiefer lecture on the subject, for he possessed that rare characteristic in a lecturer of rendering his subject clear and interesting as well. Whenever he

was to speak on the subject of contagious diseases and preventive medicine in the larger sense, he was always sure of a large as well as sympathetic and appreciative audience. It is an interesting tribute that in the last year of his life his attraction as a speaker was greater and his influence more widely felt than ever before. We recall vividly the undivided attention accorded Doctor Kiefer in his address on preventive medicine before a large audience at a pediatric conference at the University Hospital at Ann Arbor last November. He could always be depended upon in any constructive medical program, and it was within but a few minutes after receiving notice of his death that the mail brought an acknowledgment and acceptance of an invitation to speak at a meeting at Battle Creek on the fifteenth of May.

It was the privilege of one of the writers to enjoy an intimate friendship for many years with Doctor Kiefer. This intimacy had its beginning in high school and continued during college and the years of practice. In the many tributes which have been paid to Doctor Kiefer stress has been placed, and very rightly, upon his contribution to public health. It should, however, be emphasized that he was a physician who endeared himself to his many patients by guarding their interests in every way, who utilized all the refinements of modern diagnosis and added those valuable traits derived from a famous medical ancestry and from a ripe clinical experience of his own. Those who were associated with him in the care of patients realized the soundness of his judgment and that he appreciated the necessity of prompt action in dealing with the pressing problems of acute diseases.

While the public has appreciated his contribution to public health, we must remember that there is a great number of those who remember him as a kind and faithful physician, conscientious in the performance of his duty and one who always could be relied upon for help and counsel in time of need.

The sympathy of the medical profession is extended to Mrs. Kiefer and the daughters, Mrs. Edwina Bayliss, of Detroit, and Mrs. Hermine Josephine Lawrie of East Lansing.

PRESTON M. HICKEY, M.D.
JAMES D. BRUCE, M.D.

DOCTOR KIEFER AS HEALTH OFFICER OF DETROIT

Guy L. Kiefer was appointed Health Officer of Detroit at a meeting of the Board of Health held June 25, 1901, and he assumed the duties of office on July 1st. Doctor Kiefer became the Chief of the City Health Department at a time when public health administration throughout the country was undergoing reorganization. Environmental factors were giving way to the need of emphasizing the prominent part played by the individual as a disseminator of disease, not only as a patient but as a mild or missed case or carrier of infection. A true appreciation of the nature of the spread of infection has resulted in focusing attention on public health education and the teaching of personal health and hygiene.

To be effective in a program designed to combat disease, curtail the death rate and prolong the span of human life, a consciousness must be provoked and stimulated in the mind of the average citizen to realize that he himself has an important part to play in life conservation. The parents' cooperation is essential to the promotion of child health. The adult has within his own reach the means to protect himself and his family against such diseases as smallpox and diphtheria.

It was to popular health instruction that Doctor Kiefer dedicated his life. One of his first official acts after being appointed Health Officer of Detroit was to establish a system of medical inspection in the schools. This was done in February, 1902. The plan provided that a physician should visit the school each morning and exclude those who might be suffering from one of the acute communicable diseases. There being no funds available at the time, a group of physicians donated their services. During the first year of Doctor Kiefer's administration the Health Department had a total appropriation of but \$42,000. The school health service began as an experiment in four schools but by the end of the school year, the number had increased to 50, with one voluntary inspector working daily in each school.

Doctor Kiefer, knowing the effect that bad milk has upon infant mortality, gave much attention to the improvement of the municipal supply. In July, 1904, he secured the passage of an ordinance which became

effective in May, 1905, and required approval by the Board of Health before a license was issued to dealers. Almost immediately 500 dirty old cow sheds were condemned. The cleaning up of dairies and stables and the requirement that milk be kept at a low temperature assisted in reducing the infant mortality rate.

In 1905, the first tuberculosis clinic was established, with the prime object of preventing disease. Home visitation by nurses was instituted through the courtesy of the Visiting Nurse Association. In February, 1908, the first patient was admitted to the new tuberculosis tent colony made possible by the financial assistance of the Tau Beta Association and The Red Cross.

In each of his annual reports during his first eight years of office, Doctor Kiefer repeatedly showed the need of a communicable disease hospital, the construction of which was not undertaken until 1910. This modern and efficient institution has justified the labor of the pioneer as it has become a haven for the sick and contributed materially in reducing the spread of disease and preventing needless deaths from the communicable diseases and tuberculosis.

Doctor Kiefer was a pioneer in popular health education. As a teacher of health habits, he has left a lasting impression on the life and happiness of many who knew him not. He has left to those who follow in his life work a heritage full of blessings and hope for the happiness and well-being of mankind. He resigned as Health Officer on June 20, 1913, after having served the people of Detroit for twelve full and creditable years.

HENRY F. VAUGHAN, Dr. P.H.,
Detroit Health Commissioner.

DR. GUY L. KIEFER AND ORGANIZED MEDICINE

In the untimely demise of Dr. Guy Lincoln Kiefer, Organized Medicine in Michigan has lost its greatest champion. From the time of Dr. Kiefer's graduation until the day of his death he was a loyal, hard-working and aggressive exponent of all that was clean, honorable, progressive and ethical in every branch of medical endeavor.

In local, county, state and national organizations Dr. Kiefer's sterling qualifications as a man and as a physician and public health official had so endeared him to his

colleagues that he had been chosen as the presiding officer of practically every organization which had the privilege of his membership.

At every session of our state legislature, whether as a general practitioner of medicine, local health officer, president of county or state societies or as State Commissioner of Health, Dr. Kiefer was always to be found fighting fairly, squarely, conscientiously, persistently—but always honorably—to oppose any and all efforts made to weaken the lines of defense which the medical profession has maintained against the inroads of quackery, superstition, cultism and ignorance.

Whenever any effort was made to modify medical legislation in order to let down the bars of improperly prepared practitioners, Dr. Kiefer was always in the vanguard resisting to the last all the malignant influences which were allied against public safety at such times.

During the memorable contest in the recent legislature when an opportunity was nearly opened to allow improperly educated individuals, not doctors of medicine, to practice medicine in Michigan, thanks to the unbounded confidence which our Governor had in the sanity, probity and unswerving honesty of Dr. Kiefer, he stopped the bill through his veto power.

Many special instances could be mentioned where through Dr. Kiefer's efforts principally, and often solely, the profession of medicine and the health and welfare of our citizens have been guided and protected by his efforts in legislative matters.

He was conspicuous as an outstanding national figure in his successful efforts to stem the onslaught of State Medicine in Michigan, and the attempts of the State to encroach on the domain of the private practitioner of medicine. He did more than any other man to combat the tendency towards the practice of preventive and curative medicine by corporations, state, county and municipal boards of health. He courageously, truly and ably fought to bring back the practice of medicine—where it rightfully belongs—to the family physician.

His friends, the medical profession and the people of Michigan have lost in his untimely death a rugged, strong, untiring and always beloved exponent of all that was right and clean and pure and noble.

LOUIS J. HIRSCHMAN, M.D.

DOCTOR KIEFER AND THE STATE

The death of Dr. Guy L. Kiefer comes to me as a terrible shock. Day before yesterday we spent an hour together planning for the future of his department. As usual this splendid citizen and humanitarian had plans for disease prevention. This was always his farsighted view of public health. It is very hard to realize that another will have to carry his plans through.

I recall that when I tendered him the position of Commissioner of Health I did so with little hope of his accepting because of the great personal and financial sacrifice involved. However, I remembered that the finest thing about our modern politics is the fact that in every community men are to be found who willingly undergo almost any personal sacrifice to serve the public. I found Dr. Kiefer to be one of them. He was the son of the leading authority on public health and lived to occupy that position himself.

Patient, self sacrificing, self effacing, he was one of the finest and ablest men that I have known in public service.

Michigan mourns the loss of a man who made our State a better place in which to live.

FRED W. GREEN,
Governor.

The Michigan Department of Health stands second to no other department of health in its service to the people of the Commonwealth. This preëminence in the field of public service was advanced by the personality, courage, integrity and sound knowledge of Dr. Guy L. Kiefer.

Since 1916, Dr. Kiefer has advised and stimulated the executive officers that have had charge of the immediate affairs of the Department. No major movement or policy was ever inaugurated without Dr. Kiefer's knowledge and counsel.

In 1927, when the Department needed an executive to crystallize out a peace-time program from the war development, Dr. Kiefer came to the executive office with a background which made it possible for the Department to progress without loss of time.

Repeatedly his associates have said that never in their public life had they known a man who could so quickly and surely get the fundamental facts out of a controversial

situation, clarify it, and solve the problem so finally that all persons were satisfied.

He leaves behind ideas that are so perfectly ideal and so firmly implanted that no matter what adversity may come upon the Department his policies could not possibly be altered in this generation. Dr. Kiefer stabilized and assured lesser men; surely they will carry on.

C. C. YOUNG, M.D.

Department of Health, Lansing.

PERSONAL TRIBUTES

It was my good fortune to have been an intimate friend of Dr. Kiefer throughout his career as physician, educator and sanitarian.

Practicing in the same field of general medicine, we met frequently in consultation at the bedside and abundant opportunity was given me to observe and admire his graceful tact, his wide medical knowledge, his sound judgment and, most noteworthy, the affection and esteem in which he was held by his patients. As a family practitioner Dr. Kiefer was a success. He embodied the charity, the integrity, the kindness and the sense of obligation to others that were the outstanding and lovable characteristics of the old-time family physician.

Dr. Kiefer began the practice of medicine just within the threshold of the era of modern medicine. The revolutionary discoveries of bacteriology were just beginning to exert their influence upon pathology, preventive medicine and therapeutics. At that time public and private sanitation were a part of the duties of all medical men. As a family practitioner Dr. Kiefer soon realized the inadequacy of the training and opportunities of the general practitioner to give to the community the benefits of the newly expanding science of preventive medicine.

He visioned a public sanitation built upon the scientific foundation of modern pathology. Politically minded and deeply interested in civic welfare, he naturally turned to a career in this new and special field of medical endeavor. Stimulated by this broader ambition he became one of the pioneers of modern sanitation and quickly took his place among the foremost sanitarians of the country.

His successful years as a practitioner of medicine had given him a knowledge of the

delicate problems that arise in the relations of the private physician to the public health official, and to this knowledge and his sympathetic and tactful treatment of the individual practitioner is largely due the cordial relations that now exist between the medical profession and the health departments of our city and state.

The friendship of Guy Kiefer was a thing to be prized. He was loyal, charitable and joyous in his attachments, and those who were close to him have too early lost a friend it is difficult to replace.

C. G. JENNINGS, M.D.

Looking forward, twenty-five years is a long time. In retrospect, however, twenty-five years is relatively but a brief span of time. It is with that comparative view, therefore, that I feel that my acquaintance and contact with Guy Lincoln Kiefer was far too short—too brief now that it is ended. Sincere is my desire that it might have been double its length because the contact was so fruitful, so inspiring, helpful and valued. It aided me in so many, many ways. The association, the friendship, as counsellor and co-worker forged a link that bound us to each other over a period of twenty-five years. But now death has severed the bond—Guy is gone.

What words, what thoughts can one write that will adequately impart the instances, the experiences and the contacts that wove the mantle that enveloped us? To do so would be attempting the impossible.

And so, in full appreciation of the loss I have sustained, I can but resolve that the sacred memories that are mine shall ever be honored and revered. Guy's ideals and quests shall ever serve as an inspiration to endeavor to do as he would have liked me to do. He was a faithful friend—a man among men. It was a rich privilege to have so known him.

F. C. WARNSHUIS, M.D.

The late Dr. Guy L. Kiefer was one of the best known physicians of Michigan. His name was familiar to every family of our state. He was a genial, pleasant person to meet and interested in general medicine and public affairs and with this was a natural leader among his friends and the profession. These qualities early drew him into public life and public office.

He was called upon by county, city and state to represent the medical profession in the control of preventive disease. One of his outstanding qualities was his ability to understand the position of the practitioner of medicine as he had practised medicine himself. He was an expert diagnostician in contagious diseases. Many clashes were avoided between physician and family by his diplomacy and at times leniency of quarantine regulations. He was always willing to consider the situation and sympathize with the physician in doubtful cases—which made him popular with members of the profession.

The medical profession, state and city have lost a most excellent representative in the passing of our most honored health commissioner.

ANGUS McLEAN, M.D.

BURIAL

When word flashed across the state that Guy L. Kiefer had passed on during the night of May 8, 1930, the profession realized the loss that was sustained by them and the State.

The funeral was held from his residence in Detroit on Saturday afternoon, May 10. To it came a host of people from all over the state. Every organization with which Dr. Kiefer had ever been connected was represented, as were the Governor and State Departments.

Our State Society was officially represented by President Brook, Angus McLean, C. G. Jennings, L. J. Hirschman and F. C. Warnshuis.

The University of Michigan had as its official representatives Drs. J. D. Bruce, Sundwall and Novey.

The Board of Registration in Medicine was represented by Drs. McLaughlin and Kelly. In addition there were over 150 honorary bearers. The floral tributes were impressive in their abundance and richness.

A short service was conducted at the home. Following this the body was followed to the cemetery, in the Chapel of which the burial service was read and the casket was then deposited in the crematorium.

The subdued voices, the solemn demeanor of those present were fitting tribute to the passing of so distinguished a person.

RESOLUTIONS

Recording the Profession's Expressions Upon the Death of Guy L. Kiefer, M.D.

MICHIGAN STATE MEDICAL SOCIETY

At the midnight hour, between May 8 and 9, 1930, the call came, was answered and Guy L. Kiefer passed on before us to the Great Beyond.

The activities of the Michigan State Medical Society during the past twenty-five years reflect a most active rôle that Dr. Kiefer assumed in the furtherance of our work. As a physician and as a public official he was ever concerned with the health betterment of the people and sought diligently to adjust the interests of the profession to the demands of the times.

In our meetings, our councils and our deliberations he was ever found intensely concerned with our interests and relationships.

As Councilor, President, Chairman of Committees he served faithfully and efficiently. He gave of self and of time freely and cheerfully. His contributions and service were of inestimable value.

Now that he has passed on, it is but fitting that his name and deeds be recorded in our records for all time, therefore

BE IT RESOLVED: That the members of the Michigan State Medical Society do hereby acknowledge and record their sincere appreciation of the life and labors of Dr. Guy Lincoln Kiefer, attesting hereby the fact that his influence, judgment and professional capabilities were material factors that enriched and enhanced the profession's welfare, and

BE IT RESOLVED: That in the death of Dr. Guy L. Kiefer, the people of this state and the members of this society recognize the irreparable loss we have sustained while at the same time we acknowledge that we are the beneficiaries of his labors and life which were ever devoted to his fellowmen, and

BE IT RESOLVED: That we extend to the bereaved family our heartfelt sympathies. That we mourn with them the loss of so noble a husband, father and brother. That we bid them find comfort in the memories that are theirs and that we assure them that we, too, shall ever treasure and revere the name, life and deeds of our departed fellow member, Guy Lincoln Kiefer.

By direction of President J. D. Brook this expression will be recorded in our archives and a copy forwarded to the deceased's family.

F. C. WARNSHUIS, *Secretary*.

WAYNE COUNTY MEDICAL SOCIETY

WHEREAS, the late Guy L. Kiefer, M.D., was an active member of the Wayne County Medical Society; and

WHEREAS, he had always been deeply and ac-

tively interested in the altruistic endeavors of the Wayne County Medical Society and had maintained a close association with members of the medical profession who keenly feel his loss; and

WHEREAS, he and his worthy father, the late Herman Kiefer, M.D., devoted their lives to scientific progress and contributed much of permanent value not only to preventive and curative medicine but to all branches of science and art; and

WHEREAS, he was an outstanding citizen and the personification of honor, holding the respect of men for his leadership and their affection for his integrity;

THEREFORE, BE IT RESOLVED, that the Wayne County Medical Society pause in its deliberations to honor the memory of a most valuable member, a sincere friend, a loving husband and father, a successful leader in preventive medicine, an honorable citizen; and

BE IT FURTHER RESOLVED, that the Wayne County Medical Society express its sincere sympathy to the bereaved members of the Kiefer family. It sadly realizes that no words from it, formal or informal, can assuage their grief or make them feel less keenly the greatness of their loss; and

BE IT FURTHER RESOLVED, that this Resolution be spread upon the minutes of the Wayne County Medical Society, and that a copy of same be duly dispatched to the family of our departed member, Dr. Guy L. Kiefer.

A. S. BRUNK, M.D., *President*,
S. W. INSLEY, M.D., *Secretary*.

STATE ADVISORY COUNCIL

At a special meeting of the State Advisory Council of Health held in Detroit, May 9, 1930, it was voted unanimously to spread the following upon the records of the Council.

The Council has just learned with deepest sorrow of the sudden and untimely death of our beloved colleague Dr. Guy Lincoln Kiefer, Commissioner of Health of the State of Michigan.

While the Council feels keenly the deep personal loss sustained by the death of our life-long friend and co-worker, a greater loss has been sustained by the people of Michigan, to the betterment of whose health and welfare his life was dedicated.

Untiring as he was in his response to the demands of his beloved profession he was also staunch and loyal to those who had the privilege of his friendship.

He was devoted to his home and his family and was invariably to be found in the front ranks of those who were striving for the highest ideals of true and better citizenship.

(Signed) C. C. SLEMONS, M.D., *President*

R. H. HARKNESS, M.D.

LEO J. DRETZKA, M.D.

J. CHALMER LYONS, D.D.Sc.

L. J. HIRSCHMAN, M.D.

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PHYSIOLOGIC CONSIDERATIONS IN THE TREATMENT OF CHRONIC CONSTIPATION*

WALTER A. BASTEDO, M.D., Sc.D. (Hon. Columbia)†
NEW YORK

Under this heading, were I an apple grower, I might speak to the proposition that "An apple a day keeps the doctor away"; or as a merchant I might extol the latest fad, psyllium seeds, appropriately by some vendors called Psylla, only for every Scylla there may be a Charybdis. But as a physician rather do I choose as my text a paraphrase of the words of Voltaire: "A 'No' from one who has a regular and satisfactory bowel movement every day is more gracious than a 'Yes' from one who is habitually constipated" (after Hurst). In these words is expressed the reason why constipation is a subject for treatment, not that the bowels fail to move but that associated with that failure there are undesirable effects on the person.

Constipation is usually and properly de-

fined as inadequate defecation. But can adequacy in this connection be measured with a machine like basal metabolism, or weighed or proved chemically? Is defecation inadequate in the subjective sense and based on the feeling of the patient that the bowels have not moved sufficiently; or is it inadequate in the objective sense, the bowels failing to move according to an arbitrary timetable set by you or me or somebody else? Horace Fletcher, the apostle of Fletcherism, claimed to have had a movement about once

*Read at a joint meeting of the American Proctologic Society and the Medical Society of Wayne County at Detroit, Mich., May 14, 1929; also at the University of Buffalo and the Syracuse Academy of Medicine.

†Dr. Bastedo was educated at Toronto University and also the College of Physicians and Surgeons of Columbia University. He was interne at St. Luke's Hospital, New York 1899-1901; attending physician of the City Hospital, New York, 1914-1920; Assistant Professor of Clinical Medicine in Columbia University since 1917. He is now consulting physician to St. Luke's Hospital, New York; President of the U. S. Pharmacopeial convention 1930-40 and last year was awarded the honorary degree Sc.D. by Columbia University.

a week, and that a small movement, at a period when his health was the best in his whole life; and there are on record not a few instances of people who have moved the bowels only once a week, once a month, or even once in three months and yet suffered no ill health. On the other hand there are healthy people who have several movements a day throughout life, there are many with diarrhea who insist that their defecations are inadequate, and there are those who have a daily movement or a number of small movements who can be proven objectively to be constipated. As to the consistency of the feces Burnett insists that we should have dried out lumpy feces like a dog's, while a group in England advocate several mushy movements a day like those of a cow.

The method and rate of passage of some particular material through diseased bowels is often an unanswered riddle. Even in normal young men with good digestion and daily bowel movements Alvarez and Freedlander found that most took four days before beads given by mouth were all passed in the feces and some required nine days to pass as many as 50 to 60 per cent. One constipated person did not pass the last of the beads until the fortieth day. In persons not constipated I have noted that readily recognizable foods like peas, corn and spinach have varied in their time of passage in the same person from one to four or five days. In any event, therefore, we must acknowledge that "The rate for the passage of intestinal contents varies within wide limits for healthy individuals" (Hurst), and that the lack of a certain number of movements per day or their failure to have a certain consistency cannot be a wholly satisfactory criterion for the diagnosis of deranged bowel movements. For practical purposes, however, I believe that in those who are constipated we should aim to secure daily one or two stools of formed, but not hard, sausage type and of no pronounced odor.

Scope. In this review we shall not speak of surgical conditions except incidentally. Everybody knows that an esophagus patient cannot swallow enough food to make the bowels move, that pyloric obstruction is a bar to rate of travel high up in the alimentary tract, and that a cancer or gumma of the bowel or tuberculous peritonitis will result in intestinal stasis. But in these the constipation is only an incident. We shall

also refrain from discussing small intestine constipation except so far as its ileocecal terminus is concerned, for clinical constipation of the small bowel is not common and as a matter of fact is almost always due to lead poisoning. In a study of five men undergoing voluntary constipation, Donaldson noted the interesting fact that in spite of persistent failure of defecation for three or four days the small bowel continued to empty its contents into the large at a normal rate. Nor shall we speak of acute constipation or the type that benefits by a weekly or monthly pill. We confine our remarks to habitual or chronic constipation.

PHYSIOLOGY

The movements of the colon are very inactive, hence most studies of the intestine have been made upon the smaller gut. But, however sluggish, as a smooth muscle organ the colon has the properties of irritability, tonicity and contractility. *Irritability* is sensitiveness to stimuli. *Tonicity* is a property of the resting period. In a hollow viscus like the bowel tone gives the resistance to dilatation and maintains the intrainestinal pressure during the period *when the organ is not actively contracting*. High tone in a segment of the bowel makes for narrowing of the lumen and small capacity, poor tone favors dilatation and large capacity. *Contractility* relates to the active shortening or contraction of the muscle fibers. In a properly toned bowel distention by its contents is a stimulus to contraction.

In the colon there are several types of contraction, and for an understanding of colon functions these must not be confused. They are: 1. *Antiperistaltic waves* which, though weak, are important for they hold back the contents for absorption in the cecum and ascending colon. Without them the liquid material discharged in jets through the ileocecal sphincter might run right through the bowel. They may continue until the cecum and ascending colon are filled up or even distended. Then they alternate in periods with the peristaltic waves. 2. *Peristaltic waves* which appear normally in the proximal colon and alternate in periods with the antiperistaltic waves to churn the liquid contents back and forth and so favor absorption. Also by slow progression they push the concentrated contents into and along the transverse colon. They have fre-

quently been observed as weak waves, but Todd avers that normally they are only slightly less vigorous than those of the stomach. In the descending colon and sigmoid flexure vigorous peristaltic waves occur only when the contents are mushy or liquid. After a laxative, in diarrhea or in response to an enema, active peristalsis may predominate throughout the whole colon, a condition which is abnormal and ordinarily undesirable. 3. *Haustral contractions* or tonic rings which cause the normal sacculatation of the colon. They may be powerful and persistent, continuing sometimes for a long time without motion. *They have no essential propulsive effect.* Not infrequently a tonic ring separates the cecum from the ascending colon, but the true haustral contractions belong mostly to the transverse colon where the condensed feces are firmly gripped in segments and held for a long time to permit still greater concentration. In the non-absorbing descending colon the tonic rings may be absent or when present may hold the desiccated segments tightly in the form of balls. 4. *Contractions in the three longitudinal bands* which divide the circumference of the bowel into three sacculations, act as fulcra for the circular muscles and probably assist in the onward progress of the contents. The colon in activity may be drawn together so that it is less than half as long as when at rest or post mortem. 5. *Mass waves*, which occur but rarely and cause a mass movement of the contents for several or many inches in the space of a few seconds or a minute or two. Of these five types of contraction *the mass waves are normally the only strongly propulsive ones.* The greatest normal stimulus to their occurrence is eating, especially after a long period of fasting, as at breakfast. In watching with the X-rays every hour Hurst found that there was very little advance of the contents except during or after each meal, when the advance was sudden and rapid. This observation has been repeatedly corroborated by others.

The colon then is a sluggish muscular organ and its contents are not only not being propelled forward all day long, but are actually being retarded. In the cecum and ascending colon the contractions are not haustral in type and by absorption the contents are continually being concentrated so that when they reach the distal transverse they are no longer liquid. In the transverse

colon the resistant material is gripped in the haustral segments and held for a long time for further absorption. Then two or three times a day, or perhaps several times, the haustra in the mid and distal transverse colon suddenly disappear and the fecal material comes together into a sausage several inches long, which in a few seconds or minutes passes into the descending and iliac colons. After normal defecation till such a mass movement takes place these parts are usually empty or nearly so, though sometimes at defecation the contents of the transverse colon follow into the descending colon to leave it partly filled. As the day progresses two or three such mass movements fill up the terminal colon, the contents of which are kept from going farther by the sigmoid rectal apparatus. This, the narrowest part of the whole large bowel and a highly irritable area, is ordinarily found in a state of tonic contraction which enables it to hold back formed or dense feces and sometimes even liquid ones.

Thus the concentrated feces ready for expulsion are stored in the iliac and descending colons so that defecation is conveniently deferred to once or twice in twenty-four hours. But the rectum normally remains empty till defecation and there is no capacious left-sided reservoir for the storage of feces, as sometimes supposed, but all parts of the gut on the left side are strikingly smaller than the cecum and ascending colon. Any exception to this means a pathological state.

DEFECATION

Customarily, because of the morning meal and probably in addition because of the activities of dressing and the effect of habit, a mass movement takes place and forces some of the dammed up contents into the rectum, which till then remains empty. This gives the desire to defecate and urges one to the toilet where voluntary action comes into play to increase the intra-abdominal pressure and force more feces into the rectum. These in turn cause defecation reflexes which result in a great mass movement in the colon, activity of the rectal and levator ani muscles, correlated relaxation of the anal sphincters and a movement of the bowels. Tone in rectum and sigmoid is normally higher than that in the colon above, so if the bowels are not voluntarily made to move when the desire comes the feces may pass

back into the descending colon and even into the transverse. Or if the rectal tone is low the feces remain in the rectum. In either case frequent repetition of this failure to heed nature's call tends to lessen the defecation reflex and so favors the development of constipation.

The normal stimulus to contractions of the colon whether propulsive or not is distention and stimulation by the contents. The normal stimulus to propulsion is eating. The normal stimulus to defecation desire is feces in the rectum. But to produce defecation and continue it voluntary action is necessary. (In certain patients with central nervous lesions or in coma this may not be the case.)

CAUSES OF CONSTIPATION

HYPERTONY

The most important muscular cause is overaction of the retarding mechanisms. Of these there are at least four, which are situated (a) at the ileocecal sphincter region, (b) in the ascending colon and adjacent transverse, where antiperistaltic waves tend to keep the cecum and ascending colon filled, (c) in the transverse and descending colons where the tonic rings or haustral contractions firmly oppose progress, (d) in the descending-sigmoid narrowing. In addition there is a retarding mechanism in the region of the anus and the rectal valves above it. The action of these restrainers is to hold back the column of contents, and without them our food might rush right through us, a procedure which, aside from its inconvenience, might result in our starving to death. But over-irritability or overtone of any one of these restrainers may produce abnormal retardation with resulting constipation. Such overtone retardation in the colon makes for "hypertonic constipation," sometimes incorrectly spoken of as "spastic constipation." With all hypertonic retardations we must be cautious in the use of irritant drugs or foods, for depression rather than stimulation is the requirement.

ATONY AND HYPOTONY

On the other hand we may have atony or undertone at some portion of the tract, especially in the ileocecal sphincter, the cecum, the ascending colon and the rectum. The ileocecal orifice is a true sphincter and its function is a triple one, viz. (a) to hold

back the food materials in the ileum so that they may be digested and absorbed, (b) to relax intermittently and let the ileal contents into the colon in jets, and (c) to prevent reflux of material from the colon. An atonic or relaxed ileocecal sphincter not only permits the food material to pass too rapidly into the colon but in addition may allow the fecal material to regurgitate into the highly absorptive ileum and thus may be a cause of toxic states.

A capacious storage reservoir on the left side without atony may be encountered in pathological states, as for example in acquired megacolon or megalosigmoid or when there is great redundancy of the left colon; and distention of the cecum and ascending colon is frequently seen when this part which has a relatively weak musculature is unable to overcome a hypertonic constriction further along the tract. But these are not cases of atony and my observations tally with those of Sir Arthur Keith, Hurst, Alvarez, Soper and others that while relatively poor tone is frequently encountered, actual atony of the muscle in any part of the bowel is a rarity.

Aside from the conditions mentioned, important factors in the production of chronic constipation may be (a) a lack of material for propulsion, as in undereaters, over-digesters and others whose food supplies too little bulk of residue, (b) a *chronic appendicitis* with ileal stasis or a *cholecystitis* with flatulence or (c) the *mechanical factors* of poor intra-abdominal pressures and pelvic crowding. These are strikingly seen in the hyposthenic or asthenic individual with such a poor abdominal wall and undertoned pelvic floor that it is difficult to raise the intra-abdominal pressure to a sufficient degree. When in addition the cecum occupies the pelvis, the hepatic flexure flops down into the iliac fossa, the mid-transverse is below the pelvic brim, the sigmoid is long and redundant, and these together with much of the small intestine are crowded into the true pelvis, with perhaps in addition a retroverted uterus or an enlarged and irritable prostate, our only wonder is that such a person should ever have bowel movements at all.

PTOSIS

In regard to what constitutes visceral ptosis there have been several excellent researches both in England and this country.

In a study of one thousand healthy students and instructors at the University of California, with no history of bowel trouble, and about equally divided between men and women and between athletes and non-athletes, Moody and his collaborators found that in the erect position the greater curvature of the stomach was below the level of the iliac crests in 75 per cent of the males and in 88 per cent of the females, and that the lesser curvature reached below this level in 12.9 per cent of the males and in 33 per cent of the females. The cecum was in the pelvis in 63 per cent of the males and in a greater percentage of the females, and a substantial segment of the transverse colon was wholly below the crest-line in practically all and over four inches below in 33 per cent of the males and 49 per cent of the females. The English observers noted still higher percentages of low organs; for example, the cecum was in the true pelvis in 91 per cent and the greater curvature of the stomach was below the iliac crest level in 87 per cent of males and 96 per cent of females.

Moreover, at the University of London in a study of the films taken of 100 patients over forty whose complaint was gastrointestinal trouble, the position of the stomach and colon averaged higher in the abdomen than in those without disturbances of the digestive tube (Moody). *Obviously we must be guarded in making the diagnosis of ptosis as a clinical entity, and especially in attributing constipation to a low position of viscera.*

INSENSITIVENESS

As the stimulus to defecation requires sensations from the rectum and as voluntary actions are necessary for defecation it is not surprising to find a lack of desire to go to stool and consequent constipation in those taking large amounts of sedative drugs such as morphine, bromides and the barbituric acid series. These patients fail to recognize the presence of feces in the rectum. A similar condition exists in some insane, and in those with tumors or scleroses of the spinal cord or lesions of the sacral nerves, and in some instances in those with apoplexy involving the sensory apparatus.

FECAL IMPACTIONS

Common enough are these in old people, in the debilitated and in those taking morphine, but also at times we encounter quite

large fecal tumors in the young. And the interesting fact is that *in such cases there is usually an overflow diarrhea* which deceives the physician who does not examine the rectum. In a girl of eleven with diarrhea and an enormous tumor filling the whole left side of the abdomen and extending two inches beyond the midline and to the epigastrium we thought we might be dealing with a sarcoma. But as the mass could be indented with the fingers and on the release of pressure conveyed a sticky feeling like feces we instituted enema treatment, and in five days had removed the whole tumor which consisted entirely of feces. Yet she came to the hospital for diarrhea. A girl of nineteen admitted for diarrhea, a sudden onset of which had followed prolonged constipation, presented a large abdominal tumor which was discovered at operation to be a free mass in the lumen of the transverse colon. It was like a hard ball, weighed 945 gm. (about 2¼ lbs.) and was composed of cereal husks, fruit seeds, vegetable fiber and other plant parts, the result of efforts to overcome the constipation by roughage diet. Yet her complaint was diarrhea.

MENTAL AND NERVOUS STATES

Through effects on the involuntary nervous control mechanism minor states of mental disequilibrium may exert a profound influence on the bowels to produce either constipation or diarrhea. Indeed Todd states that the colon forms a reliable index of subconscious mental strain or excitement. Even in people whose bowels usually move normally it is a common experience that when worried or anxious to hurry the movement, they are unable to move the bowels even though the defecation desire is strongly present. Under nervous strain the defecation reflexes may fail to make a proper correlation between the various mechanisms involved in having a stool.

HYPOTHYROIDISM

In certain persons with chronic headache and constipation accompanied by a low basal metabolism, I discovered some years ago that thyroid extract not only caused the headaches to disappear but also in some of them resulted in normal bowel movements. Since then I have found that in hypothyroidism, whether there is headache or not, this is sometimes, though not by any means

always, the action of thyroid medication on the bowels. Brown of Johns Hopkins has recorded similar observations.

Upper rectum or sigmoid constipation is commonly due to hypertonicity of the recto-sigmoid contracture, but it may also be due to hypotone with invagination of the sigmoid into the rectum, or to a bound down retroverted uterus, an enlarged and prolapsed ovary, pelvic adhesions or some chronic pelvic inflammation, even pelvic appendicitis. *Lower rectum constipation* is due to anal irritations, prolapse, hypertrophied valves, prostatic irritation, lack of rectal sensation and lack of muscle power above the anus frequently caused by a rectocele. This last makes a large reservoir above the anus, and in rectocele patients in the vaginal position asked to bear down as if having a stool, I have seen the recto-vaginal wall pushed right through the vulvar opening without any sign of relaxation of the sphincter ani.

DIAGNOSIS

This rests on the history, the physical examination, the amount and character of the food eaten and the stools passed, charcoal or carmine tests and X-ray pictures. In the physical a rectal examination is essential, for many constipated people owe their retarded defecation wholly to difficulties in the last few inches of the alimentary tract. Feces in the rectum normally give the desire to defecate, therefore a person with a substantial amount of feces in the rectum without this desire has *rectal constipation*. Furthermore even with the desire if the patient cannot succeed in defecating owing to some rectal or anal condition, the constipation is of the rectal type.

Much information can be obtained by giving ten grains of carmine or half a dozen charcoal tablets with the noon meal. We can expect some of the pigment to appear in the stools of the next day, and are justified in making a tentative diagnosis of constipation if it does not. Furthermore, if the pigment appears plentifully in the morning stool and is practically all finally excreted the following day, we may confidently say that constipation does not exist. By this test we discover that many people who complain of constipation do not have it.

Radiographs contribute much to the diagnosis but for proper interpretation the examination should be preceded by a two-day

period on the usual diet and without laxative drugs, and should include prone, erect and lateral pictures of a barium enema. Moreover, conclusions should not be drawn from a single gastro-intestinal series. Frequently under the roentgen rays, especially in a patient taking roughage food and laxatives, the colon may be seen highly tonic and overactive at one examination, whereas after a few days of more kindly treatment its tone and activity are entirely normal. Furthermore, a barium enema should not be accepted as revealing the usual activities of the colon but rather the special effect of an enema upon it.

When we have our patients roentgenographed we must not be too ready to diagnose malposition as the cause of intestinal stasis, to view as usual the activities of the bowel in a patient who has taken laxatives or a brisk cathartic, to judge that there is atony because some proximal segment is dilated and slow in emptying, to misinterpret haustral contractions as peristaltic waves, to consider pathological a tubal descending colon or the collection of its contents into balls, to think that an opaque enema is revealing the usual activities of the colon, particularly if this enema has been preceded by a cathartic, or to assume that a sigmoid or colon distended by an enema shows its normal size and state.

TREATMENT

The prime requirement of the patient is that the bowels shall move adequately. But we have learned that through retardation in the ileum and colon a great amount of liquid material is transformed into such a small amount of feces that it demands expulsion only once or twice a day, and that to propel this liquid too rapidly is unphysiological and harmful. Unfortunately for our therapeutic understanding most of the studies of drug actions upon the colon have been made with small muscle strips suspended in saline to which the drug is added, or with the colon *in situ* activated by large purgative doses. We know of no proper studies that have taken into account the facts that the normal activities of the colon are largely restraining, and that active propulsion takes place only very occasionally. Hence we have difficulty in relating our drug actions to our needs and are too prone to use remedies with the sole idea of increasing peristalsis, an

idea which our studies have shown is not a correct one.

In any case to use our remedies intelligently we must be informed about their known actions, for the whole philosophy of the practice of medicine may be involved in attempts to answer the therapeutic why and when. Why in a particular case do we prescribe figs and bran rather than a bland diet with senna, why cascara instead of mineral oil or milk of magnesia, why epsom salts rather than castor oil? When shall it be enemas, when food, and when drugs, or when is it none of these but something outside of the alimentary tract that requires our attention?

In speaking of the treatment of constipation Dr. Arthur F. Hurst says: "I sometimes wonder whether (the colon) is not more sinned against than sinning, for what with attacks from above by purges, attacks from below with douches and frontal attacks by the surgeon, its sorrows are numerous and real." And I might add that, since the professional dietitians and newspaper medical columnists have adopted the slogan "Treat 'em rough," the poor colon must in addition nowadays suffer from a constant machine-gun bombardment of figseeds, bran and all that constitutes the great food category known as "roughage."

In *rectal constipation* it is needless to foist a lot of laxative drugs and coarse foods upon the whole alimentary tract, though to make the patient believe this it may be necessary to demonstrate by X-rays that the bowel above the rectum is functioning normally and that the feces are down in the rectum ready to be expelled. When due to atony or diminished sensitiveness rectal constipation usually can be overcome by daily efforts to have a stool at a regular time, preferably after breakfast, by paying attention to the slightest sensation of desire to defecate, by keeping the feces soft with mineral oil by mouth, by the administration of strychnine to promote tone and sensitiveness (this action of strychnine has not been proven pharmacologically) and by local treatment. This may be a glycerine or cocoa butter suppository or a small enema of a cup of water on arising to open the sphincter, or the instillation of 2 or 3 ounces of olive oil at bedtime to be retained over night. Such an amount of oil can be conveniently inserted by the patient with a soft rubber ear syringe. At times enemas

must be used daily, for large fecal accumulations which interfere with the restoration of tone must absolutely be prevented.

If the trouble is a *rectocele* surgery is indicated; or short of surgery, a softening agent by mouth to prevent hardening of the feces and something to open the sphincter. If *painful hemorrhoids*, a *fissure* or *irritated crypts* are the fault, a softening agent by mouth, the injection of oil at night and a 5 grain anesthesin suppository in the morning usually give relief. But if not or if the trouble is some other baffling condition the patient should be referred to a proctologist. Alvarez pertinently remarks that "The physician who does not often pass an anoscope has no idea of the frequency with which constipated patients present a reddened, irritated and fissured anal ring with hemorrhoids and inflamed crypts."

In *irritations of the rectosigmoid apparatus or the descending colon-sigmoid region*, which are not infrequently accompanied by diverticulitis, my treatment consists of mineral oil by mouth and rectal injections of oil to be retained over night. Soper is enthusiastic over the injection through a rectal tube of two ounces of a 25 per cent magnesium sulphate solution, at first every day, then two days out of three, then every second day and finally once a week.

But *if the site of the constipation is higher up*, then our problem may be a more difficult one. People do not come to the physician for a slight sluggishness of the bowels, but usually have tried sundry dietary and proprietary remedies. Therefore, having satisfied ourselves that there is no retroverted uterus or other surgical condition to deal with and having arranged for an abdominal support if there is a lax abdominal wall with ptosis we begin our treatment by education and laxatives. The stock advice of an educational kind is about as follows: Whether you feel like it or not, go to stool every morning about the same time. When the desire to defecate comes do not postpone going to stool. Take plenty of exercise. Drink a lot of water. Eat a sufficiency of good mixed diet which contains plenty of roughage. You all know these rules. They are good rules and are the standbys of the profession. But—

Exercise does not necessarily make the bowels move. Dr. Meylan, Athletic Director at Columbia, has told me that among

the students taking active gymnasium work over thirty per cent are constipated, and a number of my patients with chronic constipation have been professional or college athletes, gymnasium instructors, horsemen who spend much of their time in the saddle, day laborers, diggers, longshoremen, etc., compared with whose daily performance five miles or 36 holes of golf are a mere bagatelle. On the other hand many persons of completely sedentary life have no constipation. Yet exercise has real value when it has the effect of improving the appetite and the general tone, and especially is this likely to be true of outdoor exercise. Whether or not special exercises for the abdominal muscles help more than general exercise there is some doubt; but one might favor such exercises as working the abdominal muscles in and out with the chest set, raising the legs while lying on the back, and bending the trunk forward and back or from side to side or in a circular movement.

Water does not necessarily make the bowels move. In a study of a patient with a cecal fistula Beutenmüller found that plenty of water with the meals hastened the arrival of the food residues at the cecum and increased the liquidity of the cecal contents. This is a common observation after operations on the ascending colon. But in a number of non-digestive patients we found that the ingestion of a glass of water every hour for fifteen hours daily for one week, almost a gallon a day, did not increase the bowel movements and served merely to activate the kidneys. Nevertheless water is the medium of movement and exchange in the body; therefore, while excess of water has no direct laxative effect, too little may result in feces of a dried out constipated type. In this sense water may act as a softening and bulk-producing agent. In some people a large bulk of water taken on arising may cause the bowels to move.

UNDEREATING

Normal food in normal amounts is the cause of normal defecation in normal people; and habitual undereating of food, or the taking of pap types of food which are too completely digested is prone to result in constipation. This occurs in rundown conditions, is habitual with some women, is a requisite for those who have had the teeth removed and is ordered by some physicians. As an example, how could this sec-

retary expect her bowels to move when for breakfast she took one slice of bread and butter, marmalade and tea, for luncheon a single sandwich and a cup of coffee, and for dinner, which she and her sister prepared after their return from work, a small amount of meat, a piece of potato and one other vegetable, with no soup, no salad and no dessert. She was usually too tired to eat her dinner, weighed eighty pounds and took abundant daily cathartics. She was helped much by food and rest, but for a long time required the assistance of a softening agent and a tonic laxative. Even among those with means and plenty of time, especially the chronic invalids of the mucous colitis type, there are many who undereat, frequently because of a fear that this, that or the other food will disagree with them. Especially are women prone to overlook breakfast which is a normal stimulus to bowel movement.

As a rule so long as undereating continues, cathartic measures will have to be continued, therefore for those with little appetite and but slight interest in their meals it is well to begin by explaining the matter and then to advise three meals a day of properly assorted foods and adequate liquid. In addition they should endeavor to improve the appetite by outdoor exercise if possible and a rest period. One might even prescribe appropriate bitters before the dinner. In regulating the diet it is wise to figure not only on its content of adequate residues, calories and vitamins, but also on its variety and palatability so that the patient will eat it. A monotonous specified diet will rarely bring success for more than a brief period. It is a good plan to have suspected undereaters submit an exact list of the foods and fluids ingested for three days, specifying the helpings of food taken as small, average or large. A study of such a list frequently reveals dietary errors.

FOODS

The value of foods in moving the bowels may be rated according to their constituents. They act (1) by increasing the bulk of the intestinal contents, as by their structural parts, such as cellulose, skins, etc., and by unchanged oils and fats; (2) by mechanical irritation, as by seeds, husks, bran and coarse fiber; and (3) by chemical or drug action, as by sugars, laxative fruit acids and their salts, and fatty acids and soaps formed from

the fats and oils. In any case to give the stimulus of distention there must be an adequate amount of residue, and this is chiefly furnished by cellulose and other plant parts.

Residues may be classed as bland residues and roughage. Foods that leave bland residues alone are milk, cheese, lactose, fruit jellies, raw white of egg, white bread, the branless cereals and the starchy vegetables such as potatoes and rice. Foods that leave notable roughage residues are bran, the bran cereals, whole wheat, graham or bran breads, the fruits, and certain vegetables such as carrots, beets, squash, parsnips, oyster-plant, tomato, celery, turnips, the cabbage family, lettuce, beet-greens and spinach.

Hurst reports that of the dry substance of meat, eggs, white bread and rice only five per cent appeared in the feces, while of the dry substance of green vegetables and brown bread, fifteen per cent, and of the dry substance of carrots and turnips twenty per cent was recovered. The feces of a mixed diet gave 100 grams of water and 35 grams of dry substance; the feces of a vegetable diet, 260 grams of water and 75 grams of dry substance.

FATS

In hospital patients at the Mayos' Florence H. Smith found that when the bulk of fruit and vegetables reached 800 grams the movements were normal, but that when it was dropped to 600 grams there were many complaints of constipation. On the other hand even with moderately low vegetable and fruit residues if the amount of fat was high the bowels moved. But McLester objects to high fat diets on the ground that they may make an alternating diarrhea and constipation and that their fatty acids may set up a colitis, and Dixon suggests that excessive fatty acids rob the organism of bases. In any case fats belong to the class of irritant drugs for they form soaps and fatty acids, and as a matter of fact diets with excessive fat content are not especially digestible and are not acceptable to most people.

PROTEINS

Major John Bryant, Director Convalescent Department, Walter Reed Hospital, during the war, established a routine diet in which meat or eggs were allowed at one meal a day only. There were no complaints, but on a change to meat or eggs at each of

the three meals daily there was an immediate increase in the digestive disorders and "every nurse on duty reported with astonishment a sudden and almost universal demand for cathartics." Is it not possible then that in some cases less eggs and meat rather than more roughage may be the best procedure?

FRUITS

Fruits furnish considerable indigestible roughage and other residues which tend to give a laxative effect; and they may also be laxative through the cathartic acids and salts which they contain. For example, orange, lemon and grape-fruit contain potassium citrate and also free citric acid which forms sodium citrate in the bowel. Thus the eater of the fruit obtains a dose of laxative citrate. Grapes contain potassium bitartrate or cream of tartar which becomes Rochelle Salts in the duodenum. Orange juice and orange are different foods, for the juice consists largely of a solution of a saline laxative, with vitamins, while orange itself constitutes roughage, the stools invariably containing chunks of orange tissue and many orange cells full of unliberated orange juice. The same may be said of grape-fruit. Alvarez states that pineapple is constipating.

Bran is given in constipation for two reasons, that it is indigestible and that it furnishes vitamins, notably Vitamin B, which is fundamental for the production of appetite and bowel movements. In a number of mild cases it is a successful remedy. But Hedblom and Cannon have demonstrated that coarse branny food stimulates gastric peristalsis and Osborne and Mendel that it is irritating both in stomach and intestines. It is therefore contra-indicated in hyperacidity, mucous colitis, hypertonic constipation and other states of gastrointestinal irritability. This restriction applies also to bran containing cereals and graham and whole wheat bread. Post and others have reported cases of obstruction of the bowels in children by impaction of bran given to move the bowels.

Being newspaper educated your patient will probably already have tried out many anti-constipation foods, for only after he has found them to fail does he consult a doctor. But the residues are such because they are indigestible, for if they were not indigestible there would be no residue. And there are many cases in which coarse indi-

gestible roughage or acid fruit may induce irritation in a sensitive stomach or bowel or result in an abnormal production of gas, and because of this not only harm the patient but fail to overcome constipation and in some instances actually increase it. Indeed in many of these cases the stoppage of coarse fruits and vegetables permits the bowels to move normally. With a sensitive stomach or an irritable bowel, bland foods with doses of mild laxatives will do more good and less harm than the coarse indigestible and fermentable messes that are so frequently swallowed to overcome constipation.

That I am not alone in this opinion is shown by quotations from authorities on foods and on the intestines. In speaking of whole wheat bread Osborne and Mendel feel that the foods usually eaten in an ordinary diet supplement the deficiencies of white bread better than the wheat embryo itself. Alvarez emphasizes the fact that "most (of the fibrous parts of fruits and vegetables) is quite indigestible and if we eat much of it we throw a heavy burden on the bowel," and F. H. Smith of the Mayo Clinic says, "The use of indigestible materials is not unattended with disadvantages." In England, Arthur F. Hurst writes, "Although the indiscriminate use of purgatives may have serious results their dangers have been exaggerated, and indeed it is doubtful whether more harm does not result, especially in children, from the excessively irritating diet sometimes recommended." And again, "An excessive quantity of coarse indigestible food probably does more damage to the mucous membrane than a mild chemical irritant." And McCance and Lawrence say that "children are very intolerant of high cellulose diets and, for some, brown bread is far too irritating," and "one should be cautious in advising whole meal bread generally." Dr. Frank Mann found that rough diet such as cereal increased the incidence of ulcer in (experimental) liver animals, and Whitacre, Willard and Blunt have determined that fiber interferes with the utilization of protein.

Professional dietitians may harp on the benefits of the coarse, roughage, vegetable, salad, fruit, nut and bran types of diet, but we physicians know that patients with sick digestive organs frequently need bland and soothing foods. But low-residue diets are not to be continued indefinitely; and for

the restricted period we might properly provide a substitute non-irritant bulk-producing preparation, such as mineral oil or agar.

DRUGS

A great objection to the repeated or habitual use of laxatives in chronic constipation is that their action is unphysiological. They may increase tone beyond the normal and so unduly narrow the lumen of the colon and lessen its storage capacity. In the cecum and ascending colon they may change the normal retarding antiperistaltic waves into peristaltic ones, thus causing the liquid small intestine contents to rush through to the transverse colon; in the transverse and descending colon they may cause overactive peristalsis in place of the normally retarding haustration; and finally they may substitute continuous propulsive peristalsis throughout the colon for the normal occasional mass movements, and by passing the contents along in a continuous stream of liquid or mushy matter not only fill the distal colon with undigested and fermentable material but favor its passage on into the rectum to cause subjective sensations of a desire to defecate when defecation should not take place. If by correlation of retarding and propulsive mechanisms the normal colon produces one or two formed stools a day, it should be our endeavor in the constipated colon to produce the same effect and no more.

The drugs mostly employed, though not always wisely, for repeated administration in chronic constipation are: (1) softening and bulk-producing agents, (2) phenolphthalein, (3) the salines, (4) the tonic laxatives.

The *softening and bulk-producing agents* may be thought of as substitutes for dietary residues and liquid and are administered to produce bulk and a softer consistency of the colon contents. The ones that I value are mineral oil, small doses of magnesia, and agar. In those requiring a slight tonic action in addition the preparation I like is cascara-agar.

Even *mineral oil* is not totally harmless for by coating the particles of food with an unchangeable oil it retards their digestion, and as it is wholly unabsorbed it may carry out whatever is soluble in oil. Dutcher, Ely and Honeywell have suggested that this is the case with Vitamin A, and it is presumably true also for the other fat-soluble vita-

mins, D and E. On the other hand it may be useful by dissolving and carrying out some of the common poisons of putrefaction, notably indol and phenol. It frequently gives a peculiar sour odor to the stools which suggests something abnormal. Mineral oil shows its greatest usefulness in conditions of overirritability or hypertone and particularly is its softening power of value in anal irritations and rectal constipation and in those whose feces consist of conglomerates or hard masses. Preparations of agar and mineral oil together have become popular, but like all emulsions they are mostly water. In an investigation made for the American Medical Association it was demonstrated that none of them contains more than traces of agar and that they consist of from 35 to 55 per cent of water. Most of the manufacturers now furnish these preparations with the addition of magnesia, phenolphthalein, etc., rather a shotgun type of mixture.

Magnesium oxide and milk of magnesia in small doses are essentially softening and bulk-producing agents, for they carry water into the intestines and hold it there. (See below.)

Psyllium seeds, used considerably fifty or sixty years ago, given up and recently resurrected, are much like flaxseed and swell up in a watery medium to form a mucilaginous bulky mass. In some cases they serve well, but they form large mucilaginous fermenting stools or in some cases rubbery gelatinous stools. In almost all instances many of the seeds are found wholly unchanged and thus constitute roughage. Most of the psyllium takers who have come to me have been better off when the drug was stopped.

Phenolphthalein is a mild but continuous irritant which very readily results in unphysiological soft unformed stools. It is said to keep up its action by its absorption and re-excretion in the bile. It is a useful drug but its dosage should be kept as low as possible. The oil-agar-phenolphthalein preparations now much in use should be administered with circumspection, for they are a frequent cause of the undesirable substitution of loose bowels for constipation. Phenolphthalein may result in a pronounced rash.

SALINES

The action of salines is peculiar. Von Oettinger and Sollmann found that hyper-

tonic solutions of magnesium sulphate started a wave at the top of the bowel which passed rapidly down ahead of the fluid and caused evacuation before the fluid containing the salt had gained the lower reaches of the bowel. Indeed, as the fluid itself came in contact with the peristaltic region it depressed and quieted the waves. This is in line with the observations of Cook, Slesinger and Hurst on a solution of sodium sulphate given with enough barium to enable them to follow it with the X-rays. There was a watery stool in 2½ hours though at 4 hours the barium had reached only the cecum. The first watery stools did not contain an excess of sodium sulphate and the greater part of the salt was passed the next day when the motions were solid. Best also demonstrated that in dogs with fistulas so arranged that the solution could not reach the large intestine, hypertonic mineral waters produced catharsis. That the action of salines is not due to absorption, however, has been shown by many observers. Alvarez has also noted that saline fluids can pass through many feet of small intestine without any apparent motivity of the bowel at all; and that frequently, as the fluid passes along, some of the solids are dropped by the wayside and left behind. Soper has found that magnesium sulphate by rectum is wholly sedative in its action.

In the usual *large cathartic doses* the salines may produce daily soft movements for a time, but they are imperfect cleansers, unduly activate the small intestine, which does not need activating, produce entirely abnormal movements of the bowels, and have no power to restore the colon to normal. They have their values but are not curative and should not be depended upon for any great length of time.

On the other hand *weak (hypotonic) solutions of salines* may have a different effect. As determined by Siaulis and Sollmann, hypotonic solutions of various salts, even diluted Locke's solution, increase the tone of the small intestine and the rate of the peristaltic waves. But *small amounts of the laxative salts*, most strikingly those of magnesium and the sulphate of sodium (Glauber's salt), retard the absorption of the water in which they are dissolved; so that instead of being absorbed and passed out by the kidneys the water may be carried through the small intestine to the large bowel, where it adds to the fluidity and

serves as a softening and bulk-producing agent. These actions give the explanation of the laxative effect of a teaspoonful of sodium bicarbonate, milk of magnesia or common salt taken with two to four glasses of water on an empty stomach. If taken at bedtime the action is slow, if taken on arising it may be rapid. This procedure may be a useful one at the outset in getting old constipated bowels started in a new habit, but it is not to be continued indefinitely. Daily doses of magnesium sulphate frequently give a sulphide odor to the stools.

THE TONIC LAXATIVES

Of drugs for chronic constipation when the hypertonic or hyperirritable state does not predominate, the tonic laxatives excel all others. They are cascara, senna, aloes or aloin, and rhubarb. Most observers note that their action is confined to the colon and that they will act even when introduced by enema. They are therefore ideal remedies from the colon point of view. Should these drugs lie in the bowel and fail to be expelled they do not cause inflammation, and their active principles when absorbed are eliminated without harm to the kidneys. As a rule, too, their dose does not need to be increased but may be gradually reduced. They may be given in a single dose at night, as an aloin, belladonna and strychnine pill, the aromatic syrup of rhubarb, a senna preparation, a cascara pill or the fluid extract of cascara. Many people chew a few senna leaves at bedtime or take some senna tea. Others chop up senna with dates, figs, prunes, etc., and take a teaspoonful or two. If a drug of this class shows a griping tendency it may be that the constipation is predominantly due to a hypertonic condition of the colon, so if the griping is not overcome by the addition of belladonna the drug must be abandoned. Cascara is probably the worst offender of the group.

But *for cure rather than relief* a better method, though a more troublesome one to the patient, is to give these drugs in small doses throughout the day, with in addition, perhaps, a dose of mineral oil for softening purposes. Quite frequently we have had ten minims of cascara three times a day give better stools than a single dose of a dram or two at bedtime; and with tonic laxatives so administered we have seen satisfactory continuance of the movements though we pro-

gressively reduced the dose of the drug till finally it was dispensed with altogether.

It takes a long time to overcome chronic constipation and as the remedies must be continued for months they should be simple and the doses and the prescription modified from time to time. If the medicine must be continued throughout life the patient is not cured, however great may be his relief.

Many chronic neurotic patients take abundant laxatives and enemas because of a fear that if they do not have several liquid or soft movements every day they are headed for destruction. In some of them I find that a cascara-agar preparation in doses of one or two teaspoonfuls with or after the meals or a teaspoonful or two of milk of magnesia with two glasses of water at night or before breakfast will produce the normal soft formed stool and prove entirely satisfactory to the patient. But as these may not act for two or three days the patient must be warned and his coöperation secured. These patients need instruction and must be strongly impressed with the idea that liquid movements are injurious.

In the use of laxatives we have several rules:

Rule 1. Have the medicine taken every day and at the same time of day. P.R.N. administration never cures constipation.

Rule 2. Do not employ drastics. These drugs, jalap, podophyllum, scammony, colocynth, etc., can readily produce inflammation. In my laboratory days all that we had to do to demonstrate acute colitis and acute nephritis was to close off the rectum of a dog and administer a good dose of the compound extract of colocynth or the resin of jalap. I have seen death in a woman from the failure of the bowels to move in response to excessive doses of these drastics, and the autopsy revealed this same acute nephritis and colitis. Drastics are local irritants capable of producing inflammation, and chronic constipation is never cured by compound jalap powder or compound cathartic pills.

Rule 3. Use strong purges little, if at all.

Rule 4. Do not allow the feces to be liquid for any great length of time. A liquid consistency of the feces is most favorable to fermentation and putrefaction; in fact, the feces may be nothing but sewage. This is a fault that I have observed much in those taking the agar-oil-phenolphthalein preparations. Chronic constipation cannot

be successfully *cured* by replacing it with diarrhea.

Rule 5. Do not allow the feces to continue highly offensive. It means fermentation or putrefaction with all its accompanying ills. The nose is all the laboratory apparatus required to detect this. If the feces smell of the cesspool or like vinegar pickles there is something decidedly wrong.

Rule 6. Note the character of the stools. From time to time have the patient bring a full stool in a pint glass fruit jar. Patients will think more of a doctor who examines stools, and stools tell the doctor a lot about the patient. And they are no trouble, at least to the doctor, for the eye and the nose will in a moment's time furnish more valuable information than the laboratory.

Enemas. These may have to be employed occasionally, and indeed if atony of the rectum cannot be overcome they may be required throughout life. I have had two patients who have used a daily enema for some forty or fifty years. But enemas are not purely local in their effects and cannot be considered harmless.

In normal animals Cannon observed that the almost immediate result of a warm enema might be rapid waves of peristalsis in the small intestine with deep antiperistaltic waves in the large. They often continued running for long periods of time. The X-rays have demonstrated how a two-quart enema will regularly reach the cecum in 2 or 3 minutes, and how complete in most cases is the emptying of the whole colon at the subsequent defecation. Such complete emptying is far from physiological. The barium enemas also reveal the fact that enemas may pass into the small intestine. Alvarez reports some leak backwards in 60 per cent, and Dr. L. G. Cole has told me that it occurs in his X-ray department in about 20 per cent. Others say that such a leak can be produced in anyone if the enema is large enough. The extent of the backward leak depends not alone on ileocecal incompetence, but quite as much on the bulk of the enema and the extent to which antiperistalsis is set up in the ascending colon. Hanes observed that if cats and dogs were in the fasting condition an enema was always regurgitated, but never when they were well fed. In very sick humans I have seen enemas vomited, and this is of such frequent occurrence that most physicians have met

with it, or at least heard of it in their locality.

I have thought that by accustoming the rectum to the stimulus of a large bulk repeated enemas would tend to lessen the rectal tone and sensitiveness, but Soper declares that in a majority of enema users he has found, not an atonic condition of the rectum and pelvic colon, but a hypertonic state. Such patients are also prone to show mild infections with congestive and granular changes in the mucosa. *The trouble is that the usual enema consists of soapsuds.* In six out of twenty men to whom a half per cent practically neutral soapsuds enema was administered by Runge and Hartmann, occult blood was found within three days; and in all of sixteen rabbits with the same soapsuds enema an examination of the intestine revealed ulcerations and diffuse ecchymoses. With the sigmoidoscope I have many times observed marked congestion after a soapsuds enema, but never such profound changes as these. Alvarez states that powerful contractions are produced when the colon is filled with soap water and then tied off a little above the anus. For ordinary purposes a plain water enema will suffice (with or without the addition of a teaspoonful or two of sodium bicarbonate or common salt).

Colon irrigations are not to be employed to move the bowels. Their use is to get out something higher up that is not expelled in the regular bowel movement.

Massage has been recommended with the idea that it would propel the colon contents and force the bowels to move. But, as we have noted, the colon contents are propelled normally by occasional mass movements. How then, as Soper remarks, can one select the right time to apply the massage? Furthermore it is surprising how tightly the haustra will grip the more solid contents of the left half of the colon. In cats and other animals it has been found difficult to move these along even with the abdomen opened, and in humans Alvarez noted with the fluoroscope that even in thin persons the fecal matter in the left colon was held so firmly that he was unable to push it along at all.

RÉSUMÉ

1. In the small intestines constipation is not ordinarily encountered except at the terminal ileum.

2. In interpreting X-ray pictures of the colon we must be guarded.

3. During most of the time the colon is markedly a retarding organ. Only at rare intervals does it act as a vigorous propulsive organ.

4. In rectal constipation the treatment is local, with perhaps a softening agent by mouth.

5. Large factors in the production of bowel movements are the character and amount of the ingesta, and in the simpler cases attention to these may be the sole requirement. In many cases the orange in the morning and the apple at night may have real value.

6. In most cases the best diet is one with a proper amount of roughage, but avoidance of excessive amounts of any one type of food.

7. Excessive salad, fruit and vegetable roughage at every meal is prone to generate irritative digestive disturbances.

8. Irritative states of stomach or bowels contraindicate the use of roughage, therefore in the presence of gastric hyperacidity, mucous colitis and other irritative conditions the need at the outset is bland food and appropriate drugs, among which are: the softening and bulk-producing agents, phenolphthalein, the saline laxatives in small doses with much water, and the tonic laxatives.

9. Enemas should not be used indiscriminately and for ordinary purposes should consist of plain water.

10. Massage has little if any value.

11. In constipation, because of its ac-

companying ills, the first requisite is that the bowels shall be made to move; therefore in those who cannot be cured a nightly laxative is desirable.

12. In atonic types strychnine and in hypertonic or vagotonic types atropine are valuable drugs.

In final review we might say that in nature, if the bowel is normal, bowel movements are dependent upon: 1, a sufficient bulk of food residues; 2, the ability to keep the residues from becoming unduly hard; 3, the power of the residues to produce normal reactions in the bowel wall either by their bulk, by their roughage content or by chemical drug substances contained in the foods or developed from them by digestive or bacterial action.

In the treatment of constipation it is our ultimate endeavor to bring the patient back to these normals. But when the constipation is associated with diseased digestive organs and especially if these show hypertone or hyperirritability, we substitute bulk producers for the roughage part of the food residues, insure softness by water and oil, and instead of depending for stimulation on complex foods which contain or yield indefinite amounts of uncertain chemical stimulants we prescribe definite doses of drugs whose action is known. And so we are physicians.

In closing I wish to acknowledge my especial indebtedness to three great contributors to the subject of constipation, namely, Walter B. Cannon, Arthur F. Hurst and W. C. Alvarez.

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CORNS, HAMMER-TOES AND BUNIONS

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For some unknown reason these most common causes of painful feet have not received the attention from surgeons which they merit. It is largely left to the shoe salesmen, the druggist and the chiropodist to treat them and all they do is give temporary relief, but not a permanent cure.

In order that the sufferer may get around in partial comfort, constant care in the way of protection, medication, etc., must be given.

They are all due to the development of painful areas on the toes caused by the constant pressure of soft tissues between bony prominences in adjacent toes or between shoes and such prominences. Because of this prolonged pressure in these conditions, there is an irritation with the formation of calluses in the skin, subcutaneous bursal sacs in the soft parts and exostoses on the bones. These three conditions vary in degree but all are usually present in the most marked cases. When these overgrowths develop they still further increase the pressure and the pain. The painful callus may be removed by various means but will return so long as the pressure is not relieved. A permanent cure can be expected only when the bony part is removed.

For some years we have treated corns with increasing radical surgery until now, realizing that toes are of little use, we do not hesitate to even "bone" some of them. The patients will not submit to amputation, but will consent to lesser operations which change the looks of the feet but little.

A rubber stamp of the toes, such as in Figure 1, is convenient in making a record of the painful areas as determined by examination before operation.

Operations upon the feet for painful pressure are usually done with the use of a local anesthetic which is freely injected around the metatarsal head and base of the toe. The smaller bones need small instruments and are cut with bone forceps such as dentists use, of which two or three types should be available. Careful suturing with a non-absorbable material will aid in prompt healing. The operations are all done at one sitting though sometimes as many as four are necessary on each foot. The patients are kept off the feet for two weeks, when

the sutures are removed and they may get up and around.

The aim of the various operations is to remove the pressure from the underlying enlarged bone, which may be done in a number of ways, as will occur to the surgeon

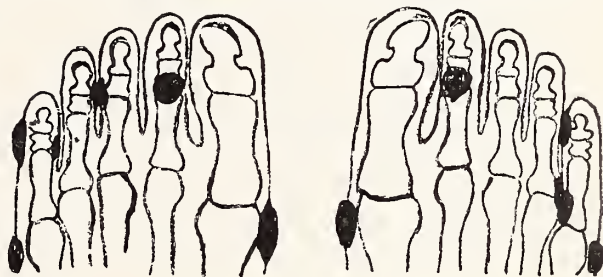


Fig. 1, showing how painful pressure spots are recorded with use of rubber stamp figure.

when operating. Several typical operations are shown diagrammatically in the figures.

Figure 2 shows the simplest kind, a soft corn due to pressure by an enlarged joint. It may be on the same toe or the one adjacent or on both. In any case the operation is the same. First a flap is turned down over the joint and then a portion of the joint is removed, usually one-half of its diameter or more as indicated by the line "a" in Figure 2. The corn which is usually in the flap need not be removed, for it will disappear in time if freed sufficiently from pressure.

Figure 3 shows the usual hammer-toe, the pain of which is often quite disabling because of the pressure on its apex and only indirectly because of the cramped position of the toe. The standard operation given in some text-books is very satisfactory. A wedge is cut out of the upper half of the toe including the corn and joint beneath as shown by the dotted line "a." The soft structures are united by fine catgut bringing

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the bone ends together before the skin is closed. At the same sitting as a preliminary operation, a small tenotome is inserted and the dorsi-flexor tendon and anterior capsule of the joint are severed. The toe is held down by an adhesive strap over

the dotted line in Figure 5, is used. This also removes the corn and the resultant toe is smaller and better looking afterwards.

Many operations have been devised for bunions but the popularity of the operation is not in proportion to the number of pain-



Fig. 2, soft corn and bone to be removed to cure it.

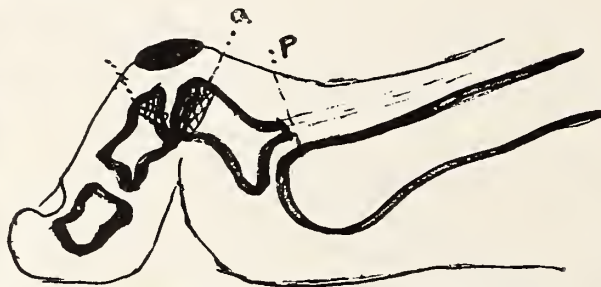


Fig. 3, hammer toe with line of excision indicated.

it and under the adjacent toes. After three weeks the shoe will keep it in place.

Around the little toe corns are most numerous and troublesome. The usual one is on the antero-lateral surface over the middle joint. The next most common occur as soft corns at the web between the fourth and fifth toes as a result of pressure made by an enlarged fourth metatarsal head which lies opposite the middle or proximal half of the first phalangeal bone of the small toe. Occasionally contact corns form from the pressure of the middle joint of the fourth toe. In addition, a very painful area develops at times over the outer surface of the fifth metatarsal head. This is similar to the ordinary bunion. These areas are indicated in Figure 4.

Where only one pressure spot is to be relieved, a flap may be turned down and the underlying bone resected liberally. For a soft corn, which is so common at the web, a vertical incision is made over the metatarsal head with excision of the exostosis which seems always to be present in such cases. This is shown by line "a" in Figure 4.

More frequently there is more than one area to be fixed so that the little toe is more commonly operated by removing all of the proximal phalangeal bone and the enlarged end of the middle one. This may be done by an elliptical incision which removes the outer corn. The bone between "c" and "d" as in Figure 4 is removed this way. When there is need for removing a button of bone from the fifth metatarsal head also, as shown by "b," an incision, as indicated by



Fig. 4, lateral corns around little toe and bone resections to cure them.

ful bunions. This may well be due to the fact that the operations done are not always successful, for the pain often persists and weak feet which ache after long use are common.

Those operations which tamper so much with the metatarsal head should not be done. The sesamoid bones are an important part of the ball of the foot and should not be disturbed even when they seem too large. The abduction of the toe is not the direct cause of pain; this is due to the pressure over the metatarsal head.

It would seem that removal of the exostosis on the inner side of the metatarsal head would cure the condition, but relief is only temporary. Examination shows these toes to be longer than the rest and if straightened up they extend beyond them. In its abducted position, the great toe with its metatarsal bone forms an angle pointing inward and, because the toe is long, there is a constant backward pressure on its tip by stocking and shoe which tends to increase this angle and push the metatarso-phalangeal joint inward against the restraining shoe no matter how it is fitted. This is indicated by the arrows in Figure 6. When the exostosis is removed the pressure is reproduced by this mechanical arrangement and pain returns. An operation which

shortens the toe as well as removes the bony enlargement seems indicated to cure bunions permanently. Kellar's operation is founded on the right principles and since using it in a simplified form the results have been almost perfect from the point of relief and

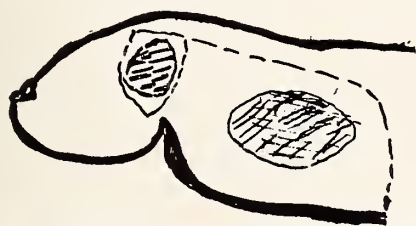


Fig. 5, line of incision for "boning" little toe and resecting exostosis of metatarsal head.

function. Such an operation would preclude toe-dancing, no doubt, but it answers for all ordinary purposes.

In this operation a generous flap is turned down, including in the flap the bursa and loose tissues down to the bone over the joint and the proximal end of the toe. The exostosis is cut off flush with the bone, avoiding of course the bearing surface beneath. The joint capsule is cut open and a narrow bladed knife is passed into the joint and over the end of the phalangeal bone between the tendons and the soft parts, freeing half its length on the upper and under surfaces, at all times hugging the bone closely.

The bone is then cut through at its middle with strong forceps and the proximal end freed from its attachments on the outer side and so removed. Too little can be taken away; it is not likely too much will be. The line of excision is shown in "a" Figure 6.

Any roughness is removed by a rongeur and the flap carefully sutured in place again. There is no need of interposing tissue so long as the cartilage covering the end of the metatarsal head is intact. The toe shortens up and while it has almost a flail joint it looks good and is painless.

In dressing the feet after operations, pads should be put between the toes and a large pad over all with a firm bandage to stop oozing. Hemorrhage of any moment seldom occurs.

As a result of this work the following opinions have been formed:

1. When operations are done for corns, bunions, etc., all should be operated. Corns of lesser degree if left will annoy with their pain.

2. Other painful conditions may need treatment also and may even make operation inadvisable as in gout and multiple arthritis. Plantar warts, flat anterior arches, hallux rigidus, "ingrown" nails, mycotic infections must be looked for and



Fig. 6, amount of bone resected for moderately developed bunion. The drawing also shows how the length of the toe tends to produce a bunion.

cared for also. Hallux rigidus though a part of a general arthritis is well treated by the bunion operation.

3. The toes are practically functionless in those who always wear shoes and efforts to save function should not interfere with sufficiently radical operations.

4. The plantar bearing surfaces must not be touched.

5. After operations the toes will go where the shoes make them. Over-corrections and the use of splints are not needed.

6. With firmly applied dressings drains are not needed.

7. Corns need not be removed if all the bony pressure is taken away. They may need trimming a few times but will eventually disappear.

8. Patients will not and often cannot afford to wear made-to-order shoes of ungainly shape. It is easier to change the bone pressure than the shoe pressure.

9. The loss of time is important and may at times be avoided by operating the feet when the patients are confined to bed for other operations.

10. The amount of suffering caused by pressure changes in the feet is great and should be eliminated more largely by proper surgery.

THE PRESENT STATUS OF RADIATION THERAPY IN PEDIATRICS

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and
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In pediatrics there are a number of conditions amenable to treatment by roentgen rays or radium; there are quite a few in which the results must be considered doubtful. Many peculiarities, due to the fact that we are dealing with a growing organism, demand special consideration in establishing indications and contra-indications for radiation therapy, and also in outlining the therapeutic technique. Since the development of radiology has now reached a certain point of equilibrium, it may be worth while to discuss here the present status of radiation therapy in pediatrics.

Before entering the clinical phase of our subject, a brief introduction into the biophysical principles of radiation is necessary.* Roentgen rays and radium have a definite biological effect on living cells and organisms. According to Bergonié, young, growing and active cells, particularly if undergoing mitosis, are much more sensitive to radiation than adult and highly differentiated cells. Another theory, called the law of Arndt-Schultz, states that small doses of roentgen rays stimulate, medium doses inhibit the growth of cells, and large doses have a lethal effect. In spite of numerous experimental papers published on the subject of stimulating doses, no agreement has been reached, and we must say that, up to date, a true stimulative effect of roentgen rays or radium has not been proved. We are speaking, therefore, of small doses of roentgen rays or radium and must be aware of the fact that we deal in therapy mostly with doses that have either an inhibitory or a destructive effect.

For many years, we have believed that the skin of children is much more sensitive to radiation than that of adults. However, extensive and careful experiments, carried out by Schall¹ have shown convincingly that

there is very little difference in the reaction of the skin of children and adults to exposure with the identical dose of roentgen rays. On the other hand, there is no doubt that the growing organism as a whole is more susceptible to radiation than the adult. A most important point is the relation between irradiated volume and total body volume. It is quite obvious that, for the same size of field of exposure, a higher percentage of the total body volume is being irradiated in a child as compared with an adult. The exact measurement of the dose becomes, therefore, imperative.

Since the International Congress on Radiology, held in Stockholm in July, 1928, has accepted the roentgen unit as the International unit in dosimetry, roentgenologists all over the world are enabled to compare their technic. While we do not wish to go into physical details regarding the definition of this unit, suffice it to say that in a number of laboratories in this country the determination of the r-unit and the calibration of measuring instruments in r-units can be carried out.² The Bureau of Standards in Washington, D. C., is also prepared now to calibrate ionization instruments in International r-units. The advantages of such a procedure are too obvious to require further explanation. In addition to this factor expressing the amount of radiation applied, the quality or penetration must be designated.³ A convenient way to do this is the method proposed by Duane, who characterizes the quality of radiation by the effective wave length. These two factors, the effective wave length for quality and the r-unit for quantity⁴ are used throughout this article.

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*For details see a series of articles by E. A. Pohle in the Wisconsin Medical Journal, beginning January, 1930.

From the clinical point of view, the diseases of children which may be benefited by roentgen rays or radium will be discussed under the following headings:

A. GLANDS OF INTERNAL SECRETION

*Thymus.** The rôle played by this organ in disturbances in infancy and childhood is still far from being a solved problem. In some cases there is, undoubtedly, a relation between the size of the organ as determined by the roentgenogram and the clinical symptoms. On the other hand, similar symptoms may be present while the thymic shadow does not exceed the so-called normal limits. This demonstrates that the clinical and roentgen ray findings must be coordinated in making a diagnosis of thymic disturbance. An interesting suggestion has recently been given by Aldrich,⁵ who observed that many clinical manifestations which were relieved by X-ray treatment of the thymus were disturbances of smooth muscle balance. If this is substantiated, the number of alarming symptoms met with in infancy which may be relieved by thymus exposure can perhaps be greatly enlarged. At the present time, the following symptoms form, in our opinion, an indication for irradiation of the thymus: (1) Stridor, (2) intermittent cyanosis not due to congenital heart disease, (3) pylorospasm. We do not believe that every enlarged thymus which is discovered incidentally when taking a roentgenogram of the chest in a child should be treated in the absence of clinical symptoms. If the patient is to undergo an operation, we urge, however, roentgen examination of the chest in all suspicious cases, followed by preoperative irradiation of the upper mediastinum, if thymic enlargement has been diagnosed. The ideal would be to examine the chest of every child by roentgen rays before undergoing any surgical procedure.⁶

The majority of radiologists use roentgen rays in the treatment of enlarged thymus; some prefer radium because it is not necessary to fix the child on the table. The radium preparation is placed over the upper chest and, therefore, the excitement always connected with the roentgen exposure may be avoided. Following the treatment of the thymus by either roentgen rays or radium, toxemia has been observed resulting in death in some rare instances. No expla-

nation can be offered so far for these fatalities.

Inasmuch as the thymus is rather radio-sensitive, a small dose of roentgen rays is sufficient; 30 r to 75 r as single dose (lambda effective equal to .32 to .21 Angstroms) are administered. That type of radiation may be produced by potentials from 100 K.V. to 130 K.V., filtered through 4.0 mm. Al or .25 mm. Cu. The dose can be repeated two or three times without any ill effects in the average case; no skin reaction should occur. Careful clinical observation and repeated roentgenograms must serve as guides in the determination of the required treatment. The absolute rule is to apply the minimum dose necessary to obtain the desired result.

Thyroid. The treatment of toxic goiter does not differ from that in adults. In view of the high mortality of surgery in hyperthyroidism in children, conservative treatment by X-rays should be given a trial first. The objection that this will lead to considerable fibrosis rendering a future operation difficult is not true if radiation treatment has been properly given; many leading surgeons have concurred in this opinion.

Most clinics prefer the use of small doses of roentgen rays in the treatment of toxic goiter. The general condition of the patient, the B M R, pulse rate and weight should be observed, and form the basis for outlining the therapeutic plan. Seventy-five r to 150 r over each lobe, sometimes the same dose over the thymus, are considered usually safe. This treatment may be repeated within two to five days, always carefully studying the reaction of the patient. The quality of radiation is the same as in thymus cases; so called deep therapy has no advantage over roentgen rays of moderate penetration in treating toxic goiter.

Hypophysis. There are not enough cases on record to permit a definite opinion as to the efficacy of roentgen therapy in the disturbance of the hypophysis. If irradiation is being attempted, the greatest caution and a very careful dosage are essential.

Suprarenals. Irradiation of the suprarenals can not be recommended.

Gonads. There is only rare occasion for treating the generative organs in children. Whenever it is indicated, the same rules as in adults apply.

B. TUBERCULOSIS

Pulmonary Tuberculosis. In adults, the

*A group of papers on this subject will be found in the March issue, Amer. Jour. Roent. & Rad. Ther., 1929.

fibrous type of pulmonary tuberculosis has been treated by small doses of roentgen rays. This requires an elaborate control of the individual patient in order to avoid ill effects. Considering the fact that the usual management of tuberculosis of the lungs brings about satisfactory results, the general use of roentgen therapy is not advocated in children. Furthermore, the fibrous type of pulmonary tuberculosis is rare in childhood.

Glands. Tuberculous involvement of the cervical glands has been treated successfully by roentgen rays in a considerable number of cases, both in the suppurative and pre-suppurative stages. Sometimes a small incision or aspiration of the pus is sufficient which does not disfigure the neck as an open drainage. Tracheobronchial and abdominal tuberculosis respond better to ultra-violet radiation. In surgical tuberculosis, local roentgen therapy may be used in supplementing the general treatment of the patient. Good results have been reported from Perthe's clinic in Tubingen.⁷

The single dose applied to the involved glands is in the neighborhood of 50 r to 150 r. Roentgen rays of moderate penetration are recommended. Treatment may be repeated two or three times at intervals of three to ten days. A new series should not be started before four to six weeks have elapsed after the first course of treatment. Heavy doses are contraindicated because of the increased danger of late reactions. Otherwise the results are gratifying in about 50 to 70 per cent of the cases.⁸ For details regarding the technic in surgical tuberculosis, we refer to the article by Jungling.⁷

C. BLOOD DISEASES

Leukemia. In acute myelogenous or lymphatic leukemia, no form of roentgen or radium therapy offers much hope. Many radiologists do not advise it because the fatal outcome seems to be hastened by irradiation. The chronic forms of leukemia are treated according to the same principles as in adults; they are rare in children.

In chronic types of leukemia, we recommend the application of moderate doses of roentgen rays and radium. The attention of the therapist should not center on the reduction of the high blood count to the normal level, because this is usually possible if a high enough dose is given. However, the white count is only one factor in this incurable disease and we should remember that in the late stage the susceptibility to

radiation decreases considerably.⁹ Moderate doses should be given, therefore, in the beginning and high doses saved for the end stage. As the symptomatic improvement of the patient means so much in such a chronic affection, the general condition of the patient should be an important factor in the determination of the therapeutic procedure. The enlarged spleen is treated first, and in lymphatic leukemia the involved glands, then the long bones, spine and sternum. Frequent blood counts are essential. A drop in the hemoglobin should caution against further irradiation. The B M R may also be followed up.¹⁰ Roentgen rays of moderate penetration are recommended. The single dose varies from 100 r to 200 r. The intervals between treatment should be as long as the condition of the patient remains satisfactory. Routine treatments at definite intervals without considering the merits of the individual case are not advisable.

Hodgkin's Disease. This is by no means a rare condition in childhood. While it is usually fatal, roentgen rays offer the best chance for temporary relief. The technic of the treatment is essentially the same as in leukemia.

D. SKIN DISEASES

The most important application of irradiation in skin diseases in children is in cases of nevi. While not all types respond well, an early attempt with radium is worth while in the majority of cases. No definite doses can be given because they have to be varied according to the requirements of the individual patient. As a rule, if one or two applications of light filtered radium do not produce any results, gamma radiation at two to three centimeters distance is indicated. Although a few clinicians recommend high doses, the majority agree that any skin erythema should be avoided. There is too much danger concerning the development of a late reaction. We can only emphasize this conservative attitude.

E. INFLAMMATORY CONDITIONS

The X-ray treatment of inflammatory conditions was inaugurated by Heidenhain,¹¹ in 1915. On May 1, 1929, his statistics comprised fifteen hundred treated cases with an average of 75 per cent good results.¹² While his list includes a good many inflammatory processes, the condition which has been most frequently and successfully treated in children is acute cervical lymphadenitis.^{13, 14} Our own experience in a

limited number of cases is bearing out the conclusions of other investigators.

In the treatment of inflammatory conditions, the principal point is the use of small doses of roentgen rays; 30 r to 75 r are sufficient. The penetration of radiation is of minor importance; 100 K.V. filtered through 4 mm. Al. or 200 K.V. filtered through 1.0 mm. Cu. will have the same clinical effect, assuming equal doses. Quite often it is necessary to repeat the first dose two or three times; provided proper technic is used, there is, of course, no danger of skin reaction.

Under this heading, we mention also the work of Bordier,¹⁵ who treated cases of poliomyelitis anterior successfully by roentgen rays. Recently the beneficial effect of roentgen rays in pertussis has been brought out again.¹⁶ In such a variable condition as pertussis, it is difficult to evaluate with accuracy the effect of any therapeutic measure.

CONCLUSIONS

1. The biophysical principles of radiation therapy as related to pediatrics are briefly discussed.

2. The more important conditions in children amenable to roentgen or radium therapy are outlined and the technic is given as far as feasible.

3. Accurate measurement of the dose and a conservative attitude in the administration of roentgen rays or radium in children is urged.

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THE TREATMENT OF THE OCCIPUT POSTERIOR POSITION

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The occiput posterior position has always been a problem for thought to obstetricians, and its proper management often taxes the best obstetrical skill. The following is a brief outline of the general course of treatment adopted at the Chicago Lying-in Hospital.

A complete prenatal examination of the pelvis is most essential in the intelligent management of any obstetric case, but is more important when the patient presents herself with an occiput posterior position at the onset of labor. If there has been some thought of the advisability of delivery from above because of the lack of room in the pelvis, the occiput posterior position may be the deciding factor. This is particularly true of that group of cases which we class under the general term of "Dystrophia Dystocia Syndrome" or "Endocrinopath." In brief, the more common features of this class are: slightly justo minor or masculine type pelvis; signs of hypopituitarism, undeveloped cervix and vagina; aged primiparity; prolonged pregnancy; overmaturity of the child; premature rupture of the membranes; protracted labor; poor pains; and occiput

posterior positions. Given a patient belonging to this class, where the disproportion between the baby and the pelvis seems too great, one should not hesitate to decide on a low cervical cesarean. Occasionally a test of labor may be necessary to convince the obstetrician that the obstacles to be overcome in a successful delivery from below are too great or impossible.

The vast majority—95 per cent—of women who enter into labor with an occiput posterior position will deliver spontaneously or with the aid of a simple forceps operation if they be given sufficient time. The course of labor is usually slow and painful, demanding the utmost care and patience on the

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part of the attendant and the patient. This means careful observation throughout the long hours of the labor, sustaining the patient with food readily digestible, the pushing of fluids and providing of rest when necessary. During the first stage we do not hesitate to give the patient $1/6$ to $1/4$ grain of morphine sulphate combined with 2 c.c. of 50 per cent magnesium sulphate solution intramuscularly. The magnesium sulphate may be repeated once or twice at 20 minute intervals. If this form of analgesia is given when the cervix is completely effaced and dilated to 3 or 4 centimeters, the patient will rest for four or five hours, awaken much refreshed and continue her labor satisfactorily. Very often one is surprised to find that considerable progress has been made during the hours that the patient has been dozing and several hours of good strong pains bring the case to a favorable end. If the labor be exceedingly lengthy and long-drawn-out, we make use of a rectal instillation as described by Gwathmey.

Slow dilatation of the cervix is characteristic of this condition. Occasionally after the effect of the analgesia has worn off, the pains return slowly and inadequately. It may be necessary to stimulate the uterus. A hot enema followed by 3 to 5 grains of quinine with or without the castor oil may be sufficient. Of late we have been using intranasal pituitrin as described by Hofbauer. This, however, is not a harmless procedure as we have noted vigorous tetanic pains following its use. One should be prepared to remove the cotton saturated with the pituitrin if occasion demands.

It may be necessary to resort to mechanical means to complete dilatation. We make use of the Voorhees bag, the size depending on the extent of the dilatation. If the cervix is only sufficiently dilated to admit one or two fingers, a 7 to 9 cm. bag is preferable; if dilated to 4 or 5 centimeters, we use a 9 to 11 cm. bag. The smaller bag is more successful in bringing on good pains in a short time, but has the disadvantage of not completely dilating the cervix. The larger bag, due to its size, often lends to the inertia of the uterus by overstretching the lower uterine segment. Metreuryesis always adds slightly to the danger of infection, displaces the head somewhat (more so in case of the larger bags) and occasionally results in a prolapse of the cord. By careful man-

agement and technic, these disadvantages may be minimized.

Rapid delivery may be demanded because of the condition of the mother or the baby. Should the cervix be completely effaced and dilated to 7 or 8 centimeters, Dührssen's incisions may be used to obtain complete dilatation.

The bag of waters, which should be kept intact, if possible, until complete dilatation has been secured, can now be ruptured and the patient allowed to make use of her bearing down efforts; often rotation of the occiput will take place after the head has reached the perineum. Progress finally comes to a standstill and nothing more can be accomplished by the patient's own efforts.

If the head is not engaged after complete dilatation, version and extraction may be the operation of choice. High forceps are dangerous for the baby and mother and have almost been abolished in our clinic. Occasionally one may successfully complete a high forceps operation in a multipara after the head has been rotated manually or with the aid of the forceps. If rotation has been completed, it is permissible to make gentle traction but if there is no progress it is far better not to persist and to deliver the baby by version and extraction.

If the head is engaged, the following is our method of treatment: At first an attempt is made to rotate the head manually. This method is successful in at least 90 per cent of cases, and the more experience one has with it the less likelihood there is of failure. It is the least harmful of all the methods described because one cannot damage baby or mother, and in the event of failure another method may be tried. The objections to it are that the head is sometimes displaced from the pelvis and occasionally the cord may prolapse. As to the first, our experience has shown that it makes little difference how far up the head is pushed to effect rotation, because once rotation is completed, the head descends into the pelvis in its new and more favorable position. It can easily be pushed down with the hand above the pubis or pulled down by gentle traction. Very often we push a head completely out of the pelvis to complete rotation with the aid of rotating the shoulders, but the head which has once been moulded in the pelvis slips back into it very easily. Prolapse of the cord rarely occurs in our

experience if the manipulations are carefully done. However, should this accident occur, the delivery may have to be completed by version and extraction.

With the patient under deep anesthesia, the perineum and vagina are carefully ironed out with the aid of plenty of green soap. This ironing-out process should extend around the entire head in the upper recesses of the vagina so that the head is made extremely mobile. In a primiparous woman it is usually necessary to do a deep medio-lateral episiotomy so that the whole hand can be inserted. Either hand may be used for the rotation although some operators prefer to use the right hand when the occiput points to the left, and vice versa. The head is firmly grasped by the hand, dislodged gently from its bed, and the occiput rotated towards the side of the back, in left posteriors to the left. If possible, the rotation is continued until the occiput comes to lie under the symphysis. The left blade of the forceps is applied before the hand is removed. The internal hand is aided by the external hand, which pushes against the forehead from above the pubis or aids the back anteriorly.

In most cases the difficulty lies not in effecting rotation but in holding the head in position until the forceps are applied. This can be avoided by applying the left blade in left rotations before the hand is removed and by having an assistant press this blade firmly against the head while the right blade is applied. In right positions one may apply the right blade first while the hand is steadying the head, then apply the left blade and swing the handle underneath the first for locking. Pushing against the forehead from above the pubis will steady the head. In cases where the head rotates back very easily, the operator may also rotate the child's back to the front and then steady the back. Lastly, after rotation of the head is complete, the head may be held stationary with an Allis forceps affixed to the scalp until the blades are applied.

One may fail to secure complete anterior rotation manually and yet be able to rotate the occiput to the transverse or beyond it. This act accomplishes considerable, and complete rotation may be secured with the aid of the forceps. The "key-and-lock" maneuver of DeLee, to be described, is par-

ticularly easy when the occiput has been rotated to the transverse or beyond it.

In our clinic at the Chicago Lying-In Hospital we rarely use Kielland or other special forceps. The ordinary Simpson blades modified by DeLee are the only forceps popular. The shank of the Simpson forceps has been lengthened to about eight centimeters, creating an instrument useful in almost any type of operation. The forceps operation in occiput transverse and posterior positions, which I shall briefly describe and present in moving pictures, has been developed by DeLee and described as the "key-in-lock" maneuver for want of a better term.

With the occiput posterior in the right oblique, the forceps are applied in the transverse of the pelvis. This grasps the head in an unfavorable diagonal manner and all motions must be made very gently. With the slightest possible compression the head is now pushed up about two centimeters in the axis of the birth canal and gently twisted so that the small frontanel is rotated no more than five degrees. The head is then pulled down a little in the axis of the pelvis. These motions are repeated several times until the occiput comes to lie in the transverse plane of the pelvis. Now the blades are gently adjusted without being removed so they, too, come to lie in the transverse plane and fit the sides of the head. The gentle maneuvers consisting of a combination push, twist, and pull motion are repeated. As the occiput travels anteriorly, the blades are gradually readjusted so they fit the sides of the head securely. Four or five readjustments of the blades may be necessary until finally the occiput comes to lie under the symphysis and the forceps applied directly to the sides of the head. Now and not before this moderate traction may be made and the head delivered. Medio-lateral episiotomy is the rule in primiparæ.

Occasionally it is impossible to effect rotation manually or with the aid of the forceps, and then it becomes necessary to deliver the baby as an occiput posterior. The forceps are applied in the usual manner, and the head is delivered very slowly, acute flexion being maintained at all times to present the most favorable diameters to the pelvis. A very deep episiotomy should be the rule because extensive damage to the perineum and sphincter muscle may result.

EPISIOTOMY*

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My purpose in bringing this subject up for consideration and discussion is three-fold,—namely: 1, to attempt to refute the arguments of those opposed to the operation, and to point out substantial anatomical reasons, if no others, why it should be done almost routinely in primipara, and in multipara who have had a previous episiotomy; 2, to offer a simple, rational method of repair in the hope that it may be more or less standardized; and 3, to change, if possible, the existing idea of the *most important* (if not the sole) indication for its employment,—namely, to prevent perineal laceration.

The operation is not a new one, for we find mention of Ould, in 1742, cutting the vulvar outlet when it offered too great resistance to the escape of the head. G. P. Michaelis, in 1810, incised the perineum to avoid a dangerous tear. Ritgen and Schultze made numerous small incisions in the tense vulvar ring to facilitate delivery and to avoid perineal damage. Scanzoni recommended two lateral incisions, Credé, one, directed from the frenulum toward the tuberosity. Dührssen, in 1888, recommended a deep mediolateral episiotomy or perineotomy for pathological cases, in which the incision was carried through the levator ani into the ischio-rectal fossa.

Almost every primipara, with scarcely an exception, suffers some damage to her pelvic floor at the time of delivery, and in many cases this damage is not evidenced at the time, inasmuch as the rupture occurs in the underlying structures, and only reveals itself in the form of cystocele, rectocele, prolapse, etc., some several weeks later, giving rise to the many frequent serious symptoms and complaints all gynecologists are so familiar with. When one recalls the anatomy of the pelvis and the pelvic floor, it is quite obvious why these conditions arise, and I believe it would be time well spent to pause for a few moments to consider the anatomy of the pelvic floor—not in detail, for the scope of this paper will not permit that, but only the more important structures so vitally affected by childbirth, namely, the muscular and fasciæ systems.

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THE MUSCULAR SYSTEM

The levator ani muscle, making up the bulk of the pelvic floor, arises from the back of the rami of the pubes, and is attached to the fascia covering the obturator internus muscle underneath a tendinous duplication of the superior levator fascia, called the "white line." The extent of the origin varies; usually it does not reach the spine of the ischium, to which the ischio-coccygeus is attached. Sometimes the two muscles fuse at their origins. The levator fibers pass downward and inward toward the median line. Posteriorly they come together on the lower end of the sacrum and coccyx; anterior to this they interlace in the median line behind the anus; next they fuse into a sling-like hammock under the perineal curve of the rectum, many of the medial fibers fusing with the sphincter ani and the lower part of the rectum. Different portions of this muscle are often given special names, thus: the ischio-coccygeus, running from the ischial spine to the coccyx; the ileo-coccygeus, running from the white line to the raphé; the pubo-coccygeus, from the posterior surface of the pubis to the raphé extending from the tip of the coccyx toward the rectum; the pubo-rectalis, from the pubis around the lower part of the rectum, sling-like.

For further consideration we may merely mention the sphincter cunni, ischio-cavernosi, and the superficial transverse perinei muscles. For the most part these muscles are rudimentary, and yet serve rather important functions. They center at a point between the rectum and vagina called the centrum tendineum perinei or perineal body. Also, the sphincter ani externus, attached posteriorly to the coccyx and anteriorly to the centrum tendineum.

THE FASCIAE SYSTEM

The endo-abdominal fascia passes down over the brim of the pelvis and soon splits into two layers. One covers the obturator internus muscle, and one goes beneath it. One half way down the obturator internus the fascia thickens into a ridge, called the arcus tendineus musculi levatoris ani (or "white line"). Here the fascia splits, one layer passing downward on top of the levator ani and one layer continuing underneath it. Just below the white line the superior levator fascia thickens into another ridge, in which are found the hypogastric vessels, ureters, and the fibers of the bases of the broad ligaments. From its inner border four layers of fascia arise; one, very thin, goes anterior to the bladder; the second between bladder and vagina; the third between vagina and rectum, and the fourth retrorectal. The root stock of these four layers forms the base of the broad ligament. Anteriorly it is continued to the pubis to form the pubovesical ligaments; posteriorly to the sacrum to form the utero-sacral ligaments, and laterally it makes the bases of the broad ligaments. One might liken this to a wire wheel, the cervix being the hub and the radiating ligaments the wire spokes; if any of the spokes are broken or stretched, the hub will be displaced, resulting in disorganization of the entire system.

The superior levator fascia now continues and covers the free edge of the levator ani muscle uniting with the deep layer of the fascia of the urogenital septum. The fascia passes across from one pillar of the levator ani to the one of the opposite side between the rectum and vagina, fusing with the third layer of the visceral fascia above described. It is somewhat thicker here and holds the two pillars of the levator close together. De Lee has called this portion the "intercolumnar fascia" of the perineum, since it is so very important in the mechanism of labor and in the repair of the pelvic floor lacerations and incisions.

These fascial and muscular planes and seams are of supreme importance in holding the cervix, bladder, vagina, and rectum in their proper relation to each other and to the pelvis. When they are torn or stretched, they allow the pelvic organs to descend in toto, or to be displaced one on the other.

An episiotomy, if done at the proper time, and repaired anatomically and with care, in

the vast majority of instances (and I might almost safely say in *all* instances) will prevent not only the usual *external* perineal rupture, but also the far more serious tearing and stretching of the underlying muscle and fascia, giving rise, as mentioned above, to cystocele, rectocele, prolapse, etc. As practiced in former years, and in the vast majority of hands today, the one purpose of an episiotomy was to prevent *external* perineal lacerations, or to direct the already existing slight external tear away from important structures, such as the anus and rectum. It is my contention that this is the *least* important of *all* the indications, and episiotomy should be done routinely (with very few exceptions) on all primipara and on multipara who have had a previous episiotomy. Prevention of damage to the underlying muscles and fascia should be our primary thought.

Now as to the type of operation. There are three types mentioned: (1) the lateral or bilateral, where the cut is made in the horizontal plane; (2) the median, where the line of incision lies in the raphé (recommended by Pomeroy and Henkel); and (3) the medio-lateral, as recommended by Tarnier and De Lee. The first, or lateral, episiotomy was one of the earliest and is now practically obsolete, as it is readily seen that it does not enlarge the outlet to any great extent and thus cannot prevent the fetal parts from damaging the pelvic floor. The second, or median, episiotomy has two serious objections: it is obvious that an extension of the incision could very readily injure or penetrate the anal sphincter or rectum; also, assuming that this does not occur, the rectal wall lies directly beneath the line of incision and in the repair it would be very easy to perforate the rectum, thus increasing the danger of infection. The one objection to the third, or medio-lateral, is that there is usually considerably more pain and distress to the patient in the early postpartum days, and this may last for three or four weeks.

The usual medio-lateral episiotomy simply cuts the skin, urogenital septum, the constrictor cunni and transversus perinei muscles, the intercolumnar fascia, and a few of the anterior fibers of the pubo-rectal portion of the levator ani. Deeper episiotomies or perineotomies may be done as necessary, extending through the levator ani into the ischio-rectal fossa. The incision is usually

made to the left side, for convenience in repair. It is our custom to wait until the head (presenting part) is crowning to the extent of three to four centimeters, when it will be noticed that the anus has opened somewhat and has been displaced downward and forward. One blade of the scissors is placed on the vaginal mucous membrane, the other on the skin of the perineal body, midway between the anus and the tuberosity of the ischium, the cutting angle being at the raphé. Under anesthesia (general, spinal, or local) all of the intervening tissues are incised by a single closure of the blades. Hemorrhage, if any, usually ceases after delivery of the fetus.

It is best to wait until after the completion of the third stage of labor before starting the repair, but it is the usual custom for us to repair the episiotomy while waiting for the placenta to separate. This is not a good practice, however, for occasionally the placenta may be large enough to cause damage to the wound repair, and also it may be necessary to extract the placenta manually, in which case the repair would most certainly suffer.

We now have a straight, clean incision and can easily replace all structures in their correct anatomic relations. W. J. Blevins of Woodland, California, in February, 1929, issue of the American Journal of Obstetrics and Gynecology, has a few refinements in the technic of his episiotomy repair which I like very much. It differs only very slightly from the repair I have always done, and yet I feel the variations are sufficient to warrant my adopting his method, which is as follows:

"1. Begin the catgut suture at the angle of the incision in the vagina, the bite including the submucous tissue only. Tie a knot underneath and use a continuous suture, taking great care not to puncture the mucous membrane. When the vaginal wound is closed with proper approximation of the tissues at the vaginal orifice, direct the suture down to the muscular tissue in the wound. Apply a clamp to the free end of the suture and leave it long enough to tie to the suture used to close the muscular layer.

"2. Enter the crown suture beneath the fascia, passing upward and through it to the skin at the edge of the wound. By deep bites gather up the fibers of the constrictor cunnis and of the urogenital septum, the

suture approximating the corresponding structures on either side of the wound, but not puncturing the vaginal wall. The ends of this suture are clamped and laid aside until the muscle suture is completed and tied. Then it is tied and cut closely, the knot being later covered with fascia.

"3. The index finger of the left hand should be in the rectum to determine the depth of the next suture. The deep suture should be started at the lower end of the wound. Tie the knot, leaving a long end to unite with the fascial suture. This should be a continuous suture, taking all of the severed tissues below the fascia, and going close to the rectal mucosa. When this suture is made tense, it approximates all the muscular tissues. It should be tied to the long end of the vaginal suture and the ends cut closely.

"4. The suture closing the fascia should begin at the upper end of the incision, starting under the fascia. It is brought through and over the fascia to the other side with the point of exit under the fascia near the point of entry and tied, drawing the fascia over the knot. This suture is continuous to the lower end of the wound. The end brought out beneath the fascia is tied to the muscle suture with the knot cut close. Thus we have mucous membrane, muscles, and fascia closed deeply, covering all sutures and knots.

"5. The skin is closed with subcutaneous silkworm gut, the point of entrance being about one inch from the side of the wound, running to the lower end of the wound and making a subcutaneous suture to the vaginal orifice, then running beneath the skin to a point of exit about one inch upward and to the side of the vulva. The suture is pulled tight, approximating the skin. A shot is put on each end about three-fourths of an inch from the skin. Thus the wound is closed with but two stitch holes in the skin and those are out of the line of vaginal discharge, thereby minimizing the probability of infection.

"The wound should be healed in ten days, and there is but a single subcutaneous suture to remove. In six weeks all tissues will be as firmly united as before labor began."

The argument has been advanced that episiotomy wounds are very prone to become infected and break down. To be sure, this type of repair requires considerable attention to technic, together with the strict

surgical asepsis. It is agreed by most men that there has been usually some error in technic when a poor result is obtained, or when an infection and slough occurs. Many men who are opposed to this operation claim that it is entirely unnecessary, stating that the pelvic floors of the women they deliver are not damaged, if proper care and deliberation is used at the time of delivery. The anatomical arrangement of the fascia and muscles is such that the birth of a large object such as a term fetal head cannot help but tear or stretch the same and in

many cases cause a complete rupture; this is readily shown postpartum by a gaping outlet and usually cytocele or rectocele or both.

An episiotomy done at the proper time and correctly and anatomically repaired will prevent the above mentioned ruptures and will leave a pelvic floor scarcely recognizable as one over which a fetus has passed.

In conclusion I cannot recommend too strongly the use of episiotomy routinely in all primipara and it must follow in all succeeding deliveries.

THE DIAGNOSIS OF ECTOPIC PREGNANCY*

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Although extra-uterine pregnancy is not a rare condition the diagnosis is frequently missed. This is due first to the fact that so few cases present the typical picture drawn in the text-books and secondly to the fact that no one test or symptom makes the diagnosis sure. The diagnosis is frequently rendered doubtful by the absence of a mass in the pelvis or the presence of gastric symptoms such as nausea and vomiting; symptoms which, if accompanied by pain in the right lower quadrant, may well suggest appendicitis. Cases are often diagnosed as salpingitis and appendicitis, and we have seen diagnoses of food poisoning and perforated gastric ulcer.

In order to arrive at a better understanding of this interesting condition it is necessary to inquire into the etiologic factors concerned and the nature of the pathologic process present. To a great extent our knowledge of the etiology of extra-uterine pregnancy is purely theoretical, so that it is impossible to point out the specific factor in each case. One of the most common etiologic agents is an old tubal inflammatory process. This must be one which has attacked the tubal mucous membrane causing adhesions which either narrow or completely close the lumen of the tube. The gonococcus is the most common organism causing this type of salpingitis. In some cases the endosalpingitis is very mild and only brings about adhesions between the four primary plicæ in the narrowest portion of the tube. The tubal lumen is narrowed enough to prevent the passage of the ovum

into the uterus and it becomes embedded in the wall of the tube.

In other cases the tubal lumen is completely closed by the inflammatory process. It may remain closed for several years, when due to a slow healing it may open sufficiently to allow a spermatozoan to pass through, but not permit the fertilized ovum to pass to the uterus.

In the first type the patient will give a history of a previous inflammatory process which was so mild that she thought very little of it. Close questioning, however, will usually give a history of a suspicious vaginal discharge with or without attacks of pain in the lower quadrants.

In the second type we see the "one child sterility cases." These people after one pregnancy use no contraceptives but fail to become pregnant. This condition may last for several years, when she has an ectopic pregnancy. Close questioning will usually give a history of infection during the puerperium or following an abortion.

Those cases in which there is no history of salpingitis are very perplexing. In some,

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diverticula in an otherwise normal tube or the presence of an accessory tube may be the causative agent. Sippel bases his theory upon the fact that he has seen an ectopic pregnancy occur in a woman whose right ovary and left tube had been removed. He believes that fertilization occurred in the pelvic cavity and that due to the time consumed in the passage of the ovum from the left ovary to the right tubal ostium it became so large that its passage down the tube was impossible. Also after a certain period the trophoblastic layer of the fertilized ovum develops a corroding capacity which aids it in embedding itself in the endometrium. In normal fertilization and passage of the ovum into the uterus this corroding action is not developed until the ovum reaches the uterus. If too much time is taken in its passage, as from the left ovary to the right tube, this action may take place as soon as it reaches the tube so that it immediately embeds itself in the tubal wall.

Katz bases his theory upon the fact that in normal pregnancy a definite change takes place in the tubal mucous membrane. The cylindrical cells lining the tubes become heaped up and lose their cilia. If fertilization should occur near the ovary the ovum might not be able to pass through the tube due to the decrease in size of the tubal lumen.

Other possible etiologic factors are an infantile condition of the tubes and an isthospasm. In the first condition the tubes are much elongated and tortuous in their course. In the second there occurs a spasm of the isthmic portion of the tube. It is known that there is such a tubal spasm but how often it causes an ectopic pregnancy one cannot say. There are many patients upon whom a Rubin test is made for sterility and the tubes are found apparently closed. But if these patients are anesthetized and the test repeated it is found that the gas passes through the apparently closed tube. If this condition can cause sterility why can it not be the cause of ectopic pregnancy?

Anatomically the tube may be divided into three parts, the interstitial, isthmic and infundibular portions. Pregnancy may occur in any portion but is more common in the last two. If pregnancy should occur in the interstitial portion it is possible for it to abort into the uterus, become attached there and develop normally. Such cases have been reported. Or rupture of the tube may

occur relatively early and a tremendous hemorrhage result because at this point the uterine and ovarian arteries anastomose. If pregnancy occurs in the isthmic portion rupture usually occurs. In the infundibular portion either rupture or abortion may occur.

Pathologically, then, there may be two types of termination of tubal pregnancy—tubal abortion or tubal rupture. Both are due to the same process, *i.e.*, growth of the ovum in a limited space and the corroding action of the trophoblastic layer of the ovum. Litzenberg has shown that the normal uterine decidua has a distinctly protective action due to its resistance to the corroding action of the ovum. He has further shown that in a tubal pregnancy there is no true decidua to resist the ovum. Hence the tubal wall and blood vessels are rapidly corroded, the intervillous spaces become filled with an abnormally large amount of blood and the ovum becomes detached. This is a tubal abortion. If the tubal wall becomes greatly thinned due to the increasing tension and corrosion, rupture occurs.

If the tubal abortion should occur near the abdominal ostium the ovum may be expelled from the tube and become reattached to the ovary or some abdominal organ. More often the ovum remains in the tube, where it is quite rapidly absorbed. At the same time there is bleeding at the site of detachment. This blood drips from the abdominal ostium and collects in the pouch of Douglas, forming a pelvic hematocele.

Should rupture of the tube occur there may be a complete rupture with a sudden severe hemorrhage or an incomplete rupture, the tube merely yielding enough to allow for the rapidly rising tension within it.

When pregnancy occurs in the tube a decidua appears in the uterus accompanied by a great venous congestion. If the tubal pregnancy is interrupted this uterine decidua is usually cast off in shreds and hemorrhage occurs from the venous sinuses which have been opened. This bleeding will continue until the tubal pregnancy is removed or absorbed, when the uterus will undergo a normal involution.

From the above it would appear that there should be two distinct groups of symptoms depending upon the type of termination which has occurred—tubal abortion or tubal rupture. These symptoms usually appear during the first two months of pregnancy

although cases have been reported which have gone for a longer period. If there is a sudden and complete rupture of the affected tube the physician usually finds the patient in shock, bloodless, and complaining of pain in the lower abdomen. There is usually a history of having skipped one period or the expected period was ten to fourteen days late. Examination will show signs of an internal hemorrhage. The lower abdomen is tender but not rigid. Pelvic examination may show a tender mass in one side, in the pouch of Douglas, or a complete absence of any mass in the pelvis. This merely means that the blood has not clotted yet.

The temperature is rarely above 99 to 99.5° F. and the white blood count is normal. The sedimentation rate in all of our cases has been high. The hemoglobin is high because the blood is concentrated. In 24 to 48 hours it will fall due to the dilution of the blood as its volume increases. The diagnosis is made from the history and the picture of an internal hemorrhage. Luckily this type of termination is least common.

Should the ovum be aborted into the abdominal cavity from the tubal ostium it may become reattached, absorbed or calcified. It is not a rare occurrence to find a small calcified fetus in the pelvis when operating upon the pelvic organs for some other condition. In this type of termination the patient usually has a sharp pain in the lower abdomen followed by vaginal bleeding. There may be no other symptoms and a physician may never be called.

The most common type of termination has purposely been left until the last. I refer to that type in which there is a detachment of the ovum from the tube wall or only a partial rupture of the wall. In either case there is only a moderate hemorrhage or a slow oozing from the abdominal ostium. These patients complain of dull pain with cramps at times and exquisite tenderness in the lower abdomen. They usually give a history of having skipped one period or the expected period was late. Suddenly cramp-like pains occurred and in 24 to 48 hours vaginal bleeding began, which they often think is the appearance of the expected period. However, the bleeding continues for 10 to 14 days accompanied by more cramp-like pains which may have been more or less severe than the first attack.

Examination usually shows few or no signs of hemorrhage. The lower abdomen may feel rigid at first but careful examination will show this to be a voluntary spasm due to the extreme tenderness. Pelvic examination shows a bloody vaginal discharge. There is usually a mass in the pouch of Douglas connected with one in the broad ligaments. This mass may vary markedly in consistency and size but is always tender. In some there is no mass in the cul-de-sac and only a lemon-sized lateral mass. In others there may be a large mass in the cul-de-sac which may feel doughy or hard and firm like an adherent pyosalpinx.

The temperature is seldom above 99 to 99.5° F. and the white blood count normal unless there is much peritoneal irritation or infection of the hematocele. The percentage of hemoglobin depends upon the amount of hemorrhage and the number of days that it has been taking place.

If the mass is doughy the diagnosis is made certain. But if it is hard and the patient gives an inflammatory history the picture is greatly distorted. The temperature, pulse and white blood count are usually not high enough for so extensive and apparently so active an inflammatory process. If, however, the temperature and white blood count are elevated a differential diagnosis can be made by introducing a small trochar into the mass in the posterior cul-de-sac.

If there is no palpable mass the diagnosis must be made from the history only. There have been three cases in our clinic during the past year who have had no palpable masses and whose abdomens have been filled with both fresh and clotted blood. This free blood in the abdominal cavity may cause nausea and vomiting or diarrhea due to its irritation of the bowel. We have seen one case in which there was nausea and the vomiting of blood accompanied by pain over the whole abdomen. There was also vaginal bleeding, which was disregarded. The patient was operated for a perforated gastric ulcer and a ruptured ectopic found.

It would seem, then, that the history, the absence of fever and elevation of the white blood count are the most constant and important factors in the diagnosis of ectopic pregnancy. The presence of a mass in the pelvis may make the diagnosis either easier or harder depending upon its character. Its presence is not necessary for diagnosis and

its character can always be determined by introducing a small trochar into the posterior cul-de-sac. This trochar may be as large as a lead pencil, and will do no harm if one keeps in the midline and very close to the posterior wall of the cervix and lower uterine segment. If pus appears the pyosalpinx may then be drained through the vagina. If blood appears a laparotomy can be performed immediately.

In conclusion, therefore, we believe that one cannot make the diagnosis from any one sign or symptom but must consider the

whole picture. We have found that this picture is peculiar in that the temperature is only slightly elevated and the white blood count low unless there is much peritoneal irritation or infection of the hematocele. There is always the history of a skipped period, pain in the lower abdomen and vaginal bleeding. When this history is accompanied by the laboratory findings peculiar to the disease, we believe the diagnosis of tubal pregnancy should be considered first of all. And if blood is obtained upon needling the post cul-de-sac, a laparotomy should be performed immediately.

AN UNUSUAL ANOMALY OF THE PELVIS

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From the various congenital deformities of the pelvis, recorded in the medical literature, extrophy of the bladder with the associated separation of the pubic arch seems to be rather uncommon. In a fairly extensive review we were able to find only 23 reported in spite of the fact that descriptions of this kind have appeared since 1723. At this time J. & Jurin J. Huxham reported such a case associated with pregnancy. Their quaint description is as follows:

"The subject of this report was a woman of Lanteglass, near Fowry, who married at the age of 23 and soon thereafter became pregnant. At about the seventh month of pregnancy, accompanied by her mother, the woman sought the services of Mr. John Bonnet, a surgeon practicing at Fowry, Cornwall. On viewing the woman's abdomen, Mr. Bonnet found no umbilicus; about 3 inches below the normal location of this feature, there was a fleshy protuberance suggesting a hen's egg in shape and size. This mass had the appearance of 'proud flesh,' and was so tender no pressure upon it could be endured by the patient. On the lower surface of the mass were two small orifices about one inch apart and through these urine dropped or spurted, she being quite unable to control it. A quarter inch below the mass was a transverse opening, having an appearance similar to the anus of a fowl. From this opening the woman had been accustomed to menstruate, and it had served as the channel of cohabitation. The surgeon by thrusting his finger into this opening was enabled to feel a firm transverse membrane which apparently separated the passage where his finger was, from another similar to it, the orifice of which appeared about two inches

below that into which the finger had been thrust. This lower orifice occupied the situation of the symphysis pubis of the normally formed woman. A few hairs were sprouting about this orifice. Below this again, appeared the anus, its sphincter being normal but more forward than the normal.

"The woman had thus an opening corresponding to the normal vulva; a supernumerary opening which appeared also to communicate with the womb; no uterine os, nor os pubis, although there did appear an apophysis jutting out from the lower part of each os ilium, but not in any way joined by synchondrosis, as in normal women.

"Labor began late at night, July 18, 1722. The pains were excessively violent but no dilatation of the vagina's orifice took place. The anus, however, was opened wide by each access of labor pain. No progress being made in delivery, the mother went into convulsions and the surgeon perceived that without surgical incision both mother and child would speedily perish. When they believed her at the point of death the relatives gave Mr. Bonnet permission to do as he saw fit, promising to hold him blameless should death occur. Thrusting his scalpel into the inferior oblong orifice he cut into the upper one, thus making them into a common opening; with scissors he cut through the membranous septum between the communicating passages. He now had room to thrust in his hand, seized the child's head, and with his finger in its mouth, delivered it alive. It was a female and well formed.

"The woman recovered and lived on, but miserably, for in standing or walking the uterus continually fell down and she would not permit Mr. Bonnet to remedy this by a suturing, as is done when

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the vulva breaks into the anus (recto-vaginal fistula?). Ulcers formed continually upon the body of the womb and the vagina because the unobstructed urine from the two small holes in the protruding mass continually poured over them. If the feces were thin and watery, a certain part of them also came at times through the cleft, and the surgeon on introducing his finger could protrude the tip of it into the anal orifice."

Other early writers that might be mentioned are John Bonnet, who reported a case in 1724; H. A. Hamilton in 1835, which was the first case to appear in American literature; and D. Ayres, who reported a case in 1859.

The monograph describes a plastic operation done upon an unmarried woman aged 28 years, who entered the Long Island College Hospital November 1, 1858, with the following history: On July 5 previous she had been delivered of a well developed child, having carried it to maturity without extraordinary difficulty. Labor commenced with free hemorrhage (footling presentation) and had lasted two hours, at the end of which time the child was born dead. The perineum was uninjured. Recovering from her confinement prolapsus uteri ensued, the organ finally presenting continually at the vulva. Examined at the Long Island College Hospital, it was found that the distance between the pubis abutments was about three inches. The bladder formed a tumor above, the nymphæ were widely separated on each side of the vulva, and the entire surface of the area between was covered by mucous membrane continuous with the lining of the vagina.

Since that date 15 other cases have been reported; of these one of the most interesting was by Randolph Winslow and appeared in a monograph in 1916. He stated that in May, 1886, a female child age six years was placed under his care for operative correction of bladder extrophy. A modified Wood's plastic operation was performed, consisting of turning flaps over toward a point somewhat below the normal location of the umbilicus, leaving a small opening through which urine escaped. In an account of this case cited in Kelly's *Operative Gynecology* we are told "the pubic bones were departed four centimeters with a thin, sharp edged fibrous band between them; above, there had been a total defect of the anterior bladder wall covered by inverted flaps of skin. He found an infantile uterus and ovaries, and on making cystoscopic examination between the flaps, two little oval

openings representing a double hymen were discovered on the posterior wall of the bladder; a sound passed through them led upward to the cervix uteri. The girl was at this time 15 years old. Dr. Winslow heard no more of the patient until January, 1914, when Dr. C. B. Reynolds of Philadelphia wrote him that he had recently delivered her of a child. This was her third child; the first having been born in November, 1901, following an instrumental delivery. This child was born alive. The second child was delivered by podalic version in 1903 and was born dead. The mother was badly lacerated and had her injuries repaired at the Cambridge Maryland Hospital. The third child was delivered at the Medico-Chirurgical Hospital, breech presentation with dead fetus. A skiagraph taken of her pelvis . . . showed an absence of the symphysis pubis and a gap three inches between the pelvic bones. In January, 1915, she was delivered by Dr. Reynolds of a fourth child, a girl weighing 9 pounds, which was born alive. This was a shoulder presentation which was delivered by podalic version. Other than a prolapsus uteri the woman remained in good health, and was able to carry out her ordinary domestic duties.

Another interesting report appeared in 1916 by Green and Armitage.

The patient was sent to Dr. Armitage (resident in Calcutta) from Burma for delivery, because in 1912 he had assisted his then Chief, Col. C. R. M. Green, in performing a Peters' operation upon her, the ureters being transplanted into the rectum. When she arrived in Calcutta she was eight months pregnant; the bladder extrophy was complete; the cervix protruded 1 inch at the vulva and the pubic bones were $4\frac{1}{2}$ inches apart. The iliac crest measurement was $9\frac{1}{2}$ inches, and the anterior superior spines measurement was $10\frac{1}{2}$ inches. The fetus was lying absolutely transverse with the back upwards, which was confirmed by X-ray examination. P.V. the vagina measured $1\frac{1}{2}$ inches and in the posterior cul-de-sac there was a dense hard resistance as of some old inflammatory deposit. The author recalled that convalescence from the ureteral transplantation had been complicated by a large parametrial phlegmon. The patient was 11 years old when this occurred; she was now 25. When labor set in an attempt was made to do external version, but owing to the mass of old inflammatory deposit in the hollow of the sacrum it was found that the head was causing the exposed bladder surface to bulge, and it was feared injury to the transplanted ureters might occur. Transperitoneal cesarean section was decided upon and a healthy 5-pound child delivered. Recovery was uneventful and was not followed by uterine prolapse, as had occurred in practically all the previously reported cases. The paper is accompanied by a large roentgenogram showing the separation of the pelvic bones and the inflammatory mass in the hollow of the sacrum.

The last case to be reported in the literature was by Eberbach and Pierce in 1928.

At the age of 19 the patient underwent ureteral transplantation because of extrophy of the bladder. Within 2 years she had married and re-entered the University Hospital (Ann Arbor, Mich.) pregnant at term. The vagina admitted two fingers but was surrounded by dense scar tissue. The scars of the



Fig. 1.

plastic repair of the bladder wall and the incisions for ureteral transplantation were well healed and showed no sign of hernia. Bony separation of about 4 inches at the symphysis. The anterior posterior diameter of the pelvis was normal, but there was a marked flare of the ilia, the intraspinal diameter being 30 centimeters. Because of the small vagina and the great firmness of the scar tissue cesarean section seemed indicated; also because it was possible that the absence of the anterior part of the bony pelvis might cause a disproportion. A normal 5½ pound female child presenting in the right occipito-anterior position was delivered. Convalescence was normal. (Nothing is said of postpartum uterine prolapsus.) A roentgenogram showing the exceptionally wide space of the split pelvis was included in the report.

The only case of split pelvis not associated with the extrophy of the bladder was reported by Friedrich Schauta in 1899, in which he states:

Woman, 23, secundipara. First child was born normally and spontaneously. No operation on symphysis at any time. No history of any rupture or accident; no scar. Upon palpation a depression like a groove could be felt, into which the fingers could be inserted easily, similar to that felt after symphysiotomy. External measurements of pelvis a little below normal, as in rachitic pelvis; distance between spines 23 cm. intercrystal measurement 25.5 cm.; intertrochanteric 31.5 cm. Upon internal examination the ends of the symphysis could be felt moving towards each other when pressure was made upon the iliac fossæ; the promontory was very high, the sacral flexure normal in both directions. There could be no doubt whatever of the diagnosis of split symphysis. Congenital split of this kind is not a rare occurrence, but Schauta finds no case in the literature of a *pregnant woman having this without ectopia of the bladder*, since as a rule the split is only one part of a larger split involving the abdominal walls and urinary bladder. The only case known to the author where the split was not of this kind is that of Walter, described by Gurlt; and this was not in a pregnant woman.

The second delivery also proved to be easy and spontaneous. The fact that the fissure was still open on the ninth day afterward argues for its congenital nature. While it has no interest obstetrically, it is deeply interesting as an anomaly of formation. The case is not wholly like the textbook form described by Litzmann, but is more nearly that described by Breus, where the high promontory is conspicuous. In the fact that only the *external* measurements re-



Fig. 2.

sembled rachitic pelvis is found another deviation from the typical Litzmann picture.

The case we wish to report is Mrs. D. of Bellevue, Michigan; first consulted one of us (Dr. Dugan) January 4, 1929. She believed herself six months pregnant, her last menstruation period being July 20, 1928. She had two previous pregnancies, one a spontaneous abortion December, 1926, at the end of the third month. She was again pregnant April, 1927. This time she was aborted at the end of the third month by her family physician and told she could never carry a baby, much less deliver one, due to her physical malformation. Her family history was negative. Father and mother living and well. Four sisters and five brothers all living and well, all normal. No history of hereditary diseases. She had the usual diseases of childhood. Pneumonia eight years ago; made a complete recovery. As a child she could run and play and climb just as well as other children. She has never been troubled with stomach trouble, shortness of breath or has never experienced any difficulty holding her water or urinating. She has always led a busy, useful life. Patient is above ordinary intelligence and has always enjoyed the best of physical health. Her menses began at 13 years, have been regular, 28-day type. There has been considerable pain at periods.

Physical examination: The patient is well developed and healthy, height 5 feet 2 inches. Weight 120 pounds. Eyes react to light and accommodation. The teeth are good. Throat normal. No goiter. The lungs expand well, there are no râles or dull areas. Heart, no shocks, thrills, murmurs or displacement. Abdomen, there is no umbilicus; in place of it there is a small scar in the right inguinal region where the cord was attached. The fundus of the uterus is about 6 inches below ensiform process. There is extrophy of the bladder which presents a diameter of 4 inches and a height of 3½ inches through abdominal wall in the inguinal region a little to the left of the midline. The pubic hair extends into clefts right and left from a triangular space in the mons veneris which is denuded of hair. There are no pubic bones. The vagina is double with partial septum. The vaginal opening is high up at a point where the symphysis should be. The rectum is at the site of a normal vaginal opening. The labia majora are deformed, assuming a circular

arrangement around two very small vaginal openings. The cervix of the uterus is blunt and meets the vagina at practically a right angle. No tip of the coccyx can be felt. Pelvic measurements were taken carefully. In estimating the external conjugate we judged the point where the symphysis pubis is normally found. Spines $22\frac{1}{2}$ cm. Crests 26 cm. Trochanter 32 cm. C.D. 17, Sup. St. 16 cm. Blood pressure 116/70. Urine was normal. Blood count 4,500,000 reds, 7,000 whites, hemoglobin 85 per cent. Wassermann, negative.

An X-ray examination of the pelvis was made and revealed nearly a full termed fetus (Fig. 1) lying in the normal L.O.A. position. There was a congenital deformity of the pubic arch, probably due to an arrest in the development of the ischium and pubis (Fig. 2). The anterior part of the pelvic girdle was absent. The pubic bones were separated about 5 inches. The superior rami were shortened and directed forward. The obturator foramen was diminished in size, narrowed and turned outward. The hips were widely separated, the inner borders of the acetabuli were at least seven inches apart. The iliac bones were abnormally flattened. The sacrum was also deformed. The lateral curve instead of being concaved was flattened, and the ileo-sacral facets were turned more outward than normal. There was a complete absence of the fourth and fifth segments of the sacrum and the coccyx.

The patient went into labor April 6, 1929, at 8 A. M. She was in good condition. The fetal heart sounds were 140 in mid-abdomen. She made no progress because there was no fulcrum for her to obtain leverage, the pubic bones being absent. All kinds of binders were applied to supply the natural deficiency of bony formations. Manual pressure to the lower abdomen was applied but these procedures did not help. There was some attempt at bearing down but at each contracture the bladder was pushed forward. And at 10 P. M., after 14 hours' labor, there was absolutely no dilatation of the cervix. At this hour Dr. R. V. Gallagher saw the patient in consultation. He advised cesarean section with the vaginal route the more desirable, as the bladder occupied that portion of the abdomen through which a classical cesarean section could be done. He also advised giving the patient several more hours trial of labor before resorting to operative procedure.

The patient was in severe pain until 3:30 A. M. April 17. She was very tired. She made no progress. She was taken to the operating room and given a nitrous oxide anesthetic. A vaginal section was done. The cervix of the uterus was split later-

ally at its thinnest point. The uterus was distorted so that the chief blood supply was in a vertical plane rather than its usual position in the lateral plane. The bladder was retracted and held out of the way. A male baby weighing 6 pounds 15 ounces was delivered at 4 A. M. The placenta was expressed in 5 minutes by Credé method. There was very little bleeding. The uterus and vagina were sewed by No. 2 chromic. The baby was in excellent condition and remained so until he left the hospital. The mother made an uneventful recovery and was discharged from the hospital 12 days after the operation. She was feeling perfectly well, was able to walk around, dress herself and dress the baby.

We have followed this case and on November 13, 1929, about seven months after delivery, both the mother and baby were in fine health.

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PHYSIOLOGY OF MENSTRUATION

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The phenomenon of menstruation is one which has been surrounded with a great deal of mystery throughout all the ages and it is only relatively recently, in fact during the present decade, that any sort of adequate explanation has been evolved to replace the widely divergent and often bizarre theories propounded to explain its mechanism of occurrence.

At the outset it may be stated that the phenomena taking place in the generative tract in the intervals between menstruations have a very definite purpose, which is to prepare the individual for the advent of a pregnancy, and in the event that impregnation does not occur, menstruation takes place so that the old preparation may be broken down and a new process of preparation instituted. The average time required for the entire process is about twenty-eight days, although some variations do occur normally, but for the purpose of this description a complete cycle of twenty-eight days will be assumed. We shall also arbitrarily assume the cycle to begin with the first day of menstrual bleeding, for this furnishes us the only externally recognizable sign of any part of the process.

While it is undoubtedly true that the other glands of internal secretion, especially the thyroid and hypophysis, have some influence in the menstrual processes, so little is certainly known pertaining to their action in this respect that we can do little more than state that they probably play some part, the exact extent of which is at present unknown. However, we do know that the greatest and most interesting phenomena take place in the ovary and the uterine mucosa, so that it will be these structures to which our attention will be turned throughout this discussion.

At the time of birth the cortex of the ovary is composed of large numbers of primordial ova separated from each other by a rather dense network of connective tissue stroma and the number of these ova has been variously estimated at from 35,000 to 60,000. Each ovum is surrounded by a single layer of endothelium-like flat cells which are to become the follicular epithelium. Already at birth a number of these primordial follicles may be seen toward the hilus of the ovary undergoing certain changes which continue in successive follicles throughout the life of the individual up to the menopause.

The follicular epithelial cells become larger and increase in number so that instead of a single layer of flat endothelial-like cells surrounding the ovum, two or three layers of cuboidal cells are formed. Meanwhile the adjacent connective tissue stroma becomes looser and more edematous and by the time the follicle has reached the size of 100 to 150 microns in diameter some of the stromal cells have arranged themselves into a dense layer around the follicle and fine capillaries may be seen extending to this layer which now becomes the theca interna of the follicle. The theca interna undoubtedly sustains nutrition for the follicle and also brings about its resorption in the event that it does not reach full maturity. The follicular cells continue to increase in number in such a fashion that the ovum assumes an eccentric position in the mass, after which a fluid-filled cavity is formed in the main mass of cells, the follicular cavity, leaving the ovum imbedded in a group of cells situated on one part of the periphery of the follicle, the cumulus oöphorus. The follicular cells, which are also called granulosa cells, undergo still further increase in numbers while at the same time the follicular fluid increases in quantity and when the follicle reaches a size of about .5 millimeter in diameter it gradually begins to approach the periphery of the ovary. During the entire period of growth of the follicle the stromal cells which have formed the theca interna undergo a concomitant increase in number, vascularity and fluid content, probably in order to maintain nutrition as well as to facilitate absorption of such hormonal substances as are elaborated by the follicle.

Up to the age of puberty the follicle usually does not develop to exceed the size of .5 mm. although some are occasionally

found which reach a diameter of 1 to 2 millimeters. All of these follicles are destined to undergo atresia so that by the time the age of puberty is reached the number of ova present in the ovaries has been reduced by about one-half and it is highly probable that the development, degeneration and absorption of these follicles along with their elaborated secretion has a great rôle in the production of the secondary sex characteristics. When such a follicle is destined to undergo atresia the ovum contained therein first loses its sharp definition and dissolution of the nucleus occurs, to be followed by degenerative changes and gradual absorption of the follicular or granulosa cells along with the follicular fluid and ovum. During all of this process the tunica interna remains intact until the entire follicle has been absorbed, after which its cells gradually become rearranged to take their places along with the rest of the stromal cells of the ovary, leaving no trace of the previous existence of a follicle. Thus far we have dealt only with the follicles developing from the time of birth up to the time of puberty, the uniform fate of which has been follicular atresia. Atresia may occur at any time in the course of development of the follicle even when it has almost reached full maturity; in fact, relatively few of them are destined to complete development.

After the age of puberty has been reached follicles continue to form as heretofore described, but as menstruation approaches, a single one situated near the hilus of the ovary may be seen to grow much more rapidly than the others and approach the periphery of the ovary. The ovum itself increases to about five times its previous size, partially by enlargement of the nucleus, but chiefly by a marked increase in protoplasm of the cells forming the so-called zona pellucida. The follicular fluid increases and the follicular epithelial cells grow correspondingly in number, forming a lining two to four cells deep except at the site of the ovum, where they are heaped up to form the discus ovigerus. A single layer of granulosa cells surrounding the ovum undergoes enlargement and is called the corona radiata. As the follicle enlarges and approaches the periphery of the ovary the discus ovigerus is gradually displaced until it occupies a position in the follicle nearest the periphery. Meanwhile, the stromal cells

forming the tunica interna keep pace, increasing in number and vascularity to form a loosely knit network of cells around the follicle except at its most peripheral portion which is to become the stigma or point of rupture of the follicle. Here there are few stromal cells and practically no blood vessels. When the follicle has reached a diameter of 12 to 18 millimeters it has gained the periphery of the ovary and appears as a cyst-like projection on the ovarian surface until rupture takes place. At the time of rupture, the ovum, together with its corona radiata and some of the cells of the discus ovigerus, is set free to enter the fimbriated end of the fallopian tube. The most rapid rate of growth of the follicle begins a few days after the beginning of a menstrual flow and rupture takes place sometime between the thirteenth and sixteenth day.

With the rupture of the follicle its wall collapses and the layer of granulosa cells, which maintains its intimate connection with the tunica interna, becomes folded upon itself. Many ruptures of capillaries occur in the theca interna, extruding blood cells and plasma through the granulosa layer into the cavity of the follicle and a fine network of fibrin is formed, in the meshes of which red blood cells may be seen entangled singly and in small groups. The fibrinous coagulum fills out the follicle occluding the point of rupture and at this time the whole structure assumes a size comparable to that of the original follicle. The capillaries present in the tunica interna send out shoots of endothelial cells through the granulosa layer into the interior of the follicle, from whence they turn back to embed themselves in the granulosa layer, the cells of which begin to undergo such a rapid increase in size that in a few days they become from two to four times their original size and the whole structure, which is now called the corpus luteum, ordinarily varies in size from that of a cherry to that of a hazel nut but may occasionally reach the size of a walnut or even a small hen's egg. In the latter half of the first week rapid vascularization takes place and the corpus luteum appears on the surface of the ovary as a yellowish-red mass of tissue projecting beyond the ovarian surface. At this time the structure has reached the character of a complete endocrine gland.

During the second week of its existence (*i.e.*, following rupture of the follicle) the connective tissue cells of the tunica interna

invade the granulosa layer and form a layer of connective tissue cells between the granulosa and the fibrinous central portion of the gland.

At the beginning of the third week after ovulation, if the ovum has not been fertilized, a sudden change takes place in the corpus luteum. The granulosa cells undergo fatty degeneration, lose their well defined character, and become very much smaller. At the same time the connective tissue cells derived from the tunica interna invade the fibrinous central portion of the gland along with capillary shoots, the fibrin is rapidly vascularized and removed by solution and phagocytosis, the effect being a rapid, marked reduction in size of the corpus luteum. Invasion of the granulosa continues, the whole structure recedes toward the hilus of the ovary, leaving an indentation on the periphery. The degenerated granulosa cells gradually disappear until at about the end of the tenth week no trace of the previous existence of a corpus luteum exists except a small collection of connective tissue cells which are themselves destined to gradual obliteration. The beginning degeneration of the corpus luteum corresponds practically identically with the appearance of the menstrual flow.

Synchronous with the cyclic phenomena just described as taking place in the ovary certain changes also occur in the uterine mucosa for the understanding of which it is necessary to first discuss some general characteristics of the uterine lining. It is composed of tubular glands which dip down to the muscular layer of the uterus and are lined with a single layer of columnar cells. The glands lie in a stroma of greater or less density and are always uniform in number, there being from two to four to each square millimeter of mucous surface. The stroma is made up of two types of structure, cellular and fibrillary. The cellular structure is composed of star-shaped connective tissue cells whose protoplasmic processes unite with those of adjacent cells to form a well connected latticework, while in the interstices between the cells is a network of fine fibrils. The stroma is further differentiated into a deeper densely packed cellular layer, with very few fibrils in the interstices between the connective tissue cells, lying next to the uterine muscle and called the basalis, and a superficial less compactly constructed layer with fewer cells and more fibrillary struc-

ture between the cells called the functionalis, for it is in this layer that most of the manifestations of the cyclic function are borne. The blood vessels, as they emerge from the muscularis, divide into small arterioles having a well defined muscular coat and adventitia as they traverse the basalis but, as they penetrate the functionalis, they again divide into numerous capillaries whose walls are made up solely of endothelium. Nerve fibres are found in all strata of the uterine wall up to the functionalis but, in spite of the most painstaking methods, they have never been demonstrated in the latter structure. This fact is of immense interest in showing that the most striking changes may be brought about in tissue by hormonal influence without the intervention of the nervous system.

In infancy and senility, when there is no functional activity of the endometrium, there is no differentiation of the stroma into layers, the whole structure having the compact cellular character of the basalis. As puberty approaches, a superficial layer having the previously described characteristics of the functionalis is formed from cells arising in the basalis and it is from the basalis that the functionalis is constantly regenerated throughout the sexual life of the individual.

The basal layer of the endometrium does not undergo any changes during the menstrual cycle except to furnish the matrix from which regeneration takes place. Its stroma is characterized by the dense arrangement of its connective tissue cells with very little intercellular structure and its glands are lined by a single layer of columnar epithelial cells. The lumina of the glands are always narrow and empty except when secretion is forced down from their upper portions, for the parts of the glands lying in the basalis do not show any signs of secretion during the entire menstrual cycle. The blood vessels of the basalis are small, although they have well defined muscular coats and are fairly numerous. The thickness of the basal layer remains rather uniform throughout the menstrual cycle and averages about .5 millimeter, subject to individual variations.

For the description of the changes in the functional or nidation layer it is convenient to divide the cycle into several periods, namely: proliferation, secretion, desquamation, and regeneration. At the beginning of

the period of proliferation, which is about the fifth day after the beginning of menstrual bleeding, a narrow but definite functional layer is developed from cells arising in the basalis. Its stromal cells are rather densely packed but still readily to be differentiated from the basal layer and few mitoses are found in the cell nuclei. The glands are straight and their lumina are devoid of secretion. From about the seventh to the tenth days the functionalis undergoes a marked increase in thickness, many mitoses are found, the stromal cells increase in number and their star-shape becomes manifest. The density of the stroma is decreased by the appearance of a fibrillary network in the intercellular spaces. The glands keep pace with the increase in thickness but remain straight and their lumina are empty. From the tenth to the fourteenth days the functionalis continues to become thicker, the stroma appears looser because of the increase of intercellular structure and fewer mitoses are found. Slight convolution of the glands is noted although they still remain narrow and show no signs of secretion. The layer has now reached about its limit in thickness.

The period of secretion begins about the fourteenth day and from its beginning to about the twenty-first day the structure of the stroma becomes progressively looser on account of an increase of intercellular fibrils as well as accumulation of tissue fluid between the cells. Mitoses disappear and the glands become markedly convoluted. The epithelium of the glands always remains as a single layer of columnar cells, the convolutions being produced by the increase in numbers throwing them up in folds. The cells of the glandular epithelium become larger and glycogen granules are found within them. Thus far only small amounts of secretion are found in the lumina of the glands.

From the twenty-first to the twenty-eighth days a rapid and marked glandular secretion takes place until they appear enormously distended and convoluted. The stroma becomes progressively looser by inhibition of fluid and increase in intercellular fibrils, and a more compact cellular layer is formed just beneath the surface of the endometrium by concentration of the stromal cells. The individual cells of the stroma become larger and are the precursors of the decidual cells of pregnancy, the

denser layer just beneath the surface becoming the decidua compacta, and the deeper less compact layer becoming the decidua spongiosa. From the twenty-fifth to the twenty-eighth days leukocytes appear in increasing numbers in the spongy layer and beginning degeneration is noted in the stromal cells.

About the twenty-eighth day the period of desquamation begins, disorganization occurs in the stroma, capillaries rupture, the tissue becomes infiltrated with leukocytes, the stromal cells degenerate, desquamation of the glandular epithelium takes place, and large portions of the endometrium are cast off with bleeding into the uterine cavity. Desquamation, autolysis and phagocytosis accomplish complete destruction of the functionalis so that about the third or fourth day after the beginning of menstruation only the basalis remains and the epithelium of the glands remaining in the basalis may be seen growing out to reinvest the uterine cavity.

By correlation of the facts heretofore enumerated it is concluded that the menstrual cycle is controlled by the ripening and ripened ovum. The ovum controls the growth and function of the granulosa cells of the follicle, which eventually form the corpus luteum, and these in turn control the course of events in the endometrium. Thus the ovum holds its mastery until it is no longer capable of fertilization and undergoes degeneration; the corpus luteum, freed of the influence of a living ovum, suffers regressive changes which are, in turn, followed by the changes in the endometrium leading up to menstruation.

The proliferation phase of the endometrium takes place only in the presence of a ripening follicle in the ovary, the secretion phase only in the presence of a corpus luteum in full function, and desquamation only in the presence of a degenerating corpus luteum, this last being coincident with menstruation.

DISCUSSION

Dr. H. A. Furlong (Pontiac): The subject has been very well covered by Dr. Alles. There is one point of interest here that in the last year we tried at the University Clinic. We first secured the impetus for this work from the work done at the Ford Hospital by Dr. Pratt in which I think Dr. Nelson participated.

There was an effort to settle the question of the relation between menstruation and ovulation by irrigation of the fallopian tube in an effort to secure the

ovum from the tube. We tried this in every case that came to the operating table, exclusive of inflammatory cases. The lower uterine cavity was closed off by the ordinary plan and the wall of the uterus pierced with an ordinary Wassermann needle, and a saline solution was injected into the cavity. The tubes were held over watch glasses and the debris washed out of the tubes very easily. We were successful in securing one specimen which we were quite sure was a fertilized ovum. That is now in the hands of Dr. Huber for further study.

A very interesting bit of work had been done previously and we had carried it on there. So the evidence now is pretty well established.

This has a great deal of importance in the treatment of sterility cases. So wide has become the use of the Rubin test that most everyone is now able to carry out these tests in his office. The results, however, have varied in direct proportion to the knowledge obtained by the man who is doing the work. The most successful time for doing the Rubin test has been found to be shortly following the menstruation so that there is present in the tube, at about the twelfth or fourteenth day following the onset of menstruation, live spermatozoa. At that time fertilization is most apt to occur.

The correlation between the ovulation and menstruation is of great clinical importance, something that cannot be forgotten.

Further, there is the extraction of the corpus luteum hormones in an effort to use those in clinical work, to stimulate various functions and to lessen the stimulation of other disturbed functions. I have in mind the use of corpus luteum in the onbringing of pregnancy. It is becoming a very widespread practice, one which I think should be lessened because we have not yet enough evidence to prove that the onbringing of pregnancy will be greatly affected by the use of the corpus luteum method. We cannot separate the psychical effect of such administrations and the actual result of the hormone.

In think until we have more evidence that they are of some value they should be used less widely than they are at the present time.

Dr. Lewis E. Daniels (Detroit): I would like to ask one question: Does Dr. Alles know of any reason why some women, following childbirth or pregnancy, begin to menstruate the first month, or in six weeks, while they are still nursing the baby and why others do not menstruate until about the sixth or seventh month?

Dr. R. W. Alles (closing discussion): My reason for bringing to you this paper was for its clinical information. I happened into a laboratory one day and in looking over the specimens removed at operation that day I saw two ovaries removed by different surgeons. One of them contained a ripe corpus luteum, the other one contained an almost ripe graafian follicle. Both of these had been removed and I could see no other macroscopic evidence of disease in the ovaries.

I held up the bottle to the pathologist and said, "This looks like a normal ovary to me and a corpus luteum."

"Yes," he said, "you are a good diagnostician."

"This looks like one with a graafian follicle. Why were they removed?"

"You answer that for me and I will answer it for you."

Then I went on, "What proportion of ovaries which you receive here are normal ovaries and what proportion have pathological evidence in them?"

"Over one-half of the ovaries submitted are perfectly normal ovaries."

It is probable that the surgeons remove the ovaries because of their belief that there is some pathology in them when they see a corpus luteum or a ripening graafian follicle; they think there is a cystic degeneration of the ovary.

Dr. Daniels' question is one which I hadn't anticipated and one which I think that he can answer just as well as I can. That is, that there probably is no ovulation. The reason why there is no ovulation I cannot say. The reason why no ovum develops to full maturity and no follicle ruptures I do not know and I do not believe anybody else does either. If menstruation takes place early following the delivery of a child it may mean that there has been early resumption of ovulation.

ADVANCES WORKING THEORY OF CAUSE OF CANCER

A tentative working theory of the cause of cancer was advanced at the Minneapolis meeting of the American College of Physicians by Dr. Leo Loeb of the Washington University School of Medicine. Dr. Loeb reviewed the present knowledge of cancer, which consists of a number of disconnected facts brought out by various investigators, and proposed his theory which attempts to construct from these facts a connected whole.

If the action of heredity is considered as sensitizing the substratum to the effect of various agencies which promote growth, it may be concluded that all

the factors which cause cancer have in common the faculty of increasing the reproductive, growth-producing activity of cells, usually over a long period of time. It is this continued excess in reproductive activity in localized and often in sensitized cells which leads in the end to the cancerous changes, according to the theory suggested by Dr. Loeb.

"Thus we might tentatively attempt to construct out of more or less isolated facts a connected whole, a provisional theory," Dr. Loeb said. "This theory presumably will have to undergo many changes, but it will have served its purpose if it makes it easier for us for the time being to keep in mind and to understand many otherwise disconnected findings."—Science Service.

PLANTAR WARTS

CYRIL K. VALADE, M.D.†

DETROIT, MICHIGAN

Parents and guardians of school children in Detroit have been greatly alarmed during the past eighteen months. The cause of this hysteria is the increasing number of plantar warts which have affected those boys and girls taking gym and using the pools and showers. The health and school authorities are making every effort to stem the increasing number of infections. Because infection it is, proven by the fact that only those using the showers and gymnasium are suffering with this troublesome disease of the skin. Dr. W. H. Shipton of Detroit found, during his periodic examinations of school children, that in October and November, 1929, between three and four hundred boys and girls in his district alone had plantar warts. He called to the attention of the Board of Health the alarming proportions to which the infection had spread. Since that time their sanitary engineer, at the direction of a specially appointed dermatologist, has begun a scientific investigation as to the cause, result and prevention of this troublesome infection. Other investigations have shown that the places of contagion are the floors of the locker rooms, shower baths and swimming pools. The shoes are removed at the lockers and the students walk barefooted to the showers and pools, picking up the infection on the way. At a second examination, held in January, 1930, Dr. Shipton found that having eliminated children with plantar warts from swimming pools he had lowered the prevalence of this disease by 50 per cent. Another serious infection picked up from the floor of locker rooms and pools is the well known "athlete's foot" or, strictly speaking, epidermophytosis. The prevalence of the latter disease as estimated by various dermatologists is 60 per cent. In our experience this estimation is very conservative.

It is surprising how little is found in the reference books about the etiology of *verruca plantaris*. Consequently, the writer thought it worth while to review what is known about this very persistent disease.

THE ANATOMY OF THE WART

The wart¹ starts as a pinhead circular whitish elevation of flat epithelium. As this

enlarges it goes deeper into the subcutaneous epithelium and the blood vessels of the rete papillae project upward to supply it with blood, forming finger like projections, each with a central core of fibrous tissue and a blood vessel loop (explaining the bleeding points of a wart). In some cases the upward growth of the little tumor is most marked and in others the downward growth. If the end of a curette is pressed against the base of a fairly well developed wart of the free surface, it frequently may be tipped out of its bed and it is indeed surprising what a deep hole is left. The thicker and denser the epithelium of the location of the wart, the greater the depth the wart is capable of extending downward. In the thick epithelium of the plantar surface of the foot, warts may attain an extraordinary depth and this fact must be kept constantly in mind when treating them. For the same reason they are deep on the palmar surface of the hands and about the nails, and these also are the only places, the soles, the palms and about the nails, where warts are painful and in these localities they may be extremely painful. The plantar lesions often resemble a callosity, are painful and interfere with walking. They occur most often on points of pressure, but may be scattered irregularly over the entire plantar surface. They are often single but may be numerous, especially in juveniles. (See photographs.) They are pea-sized or larger, usually covered with a horny plate and surrounded by a keratotic ring. The center is composed of the usual hypertrophied papillae and is comparatively soft. The character of the lesion is often not seen until the horny plate is removed by treatment or by the scalpel. The lesions are persistent and very resistant to treatment.

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THE ETIOLOGY

From an etiological standpoint, many observers have given us convincing evidence, scientifically, of the infectibility of warts. Of course in all varieties of warts, age is the predisposing factor. Trauma, in the

by suggestion in from one to five weeks. He goes still farther in his superstitious wanderings by stating that the other popular procedures act in the same way. This may explain one of the old beliefs that to rub a wart with a piece of candy, wrap the candy

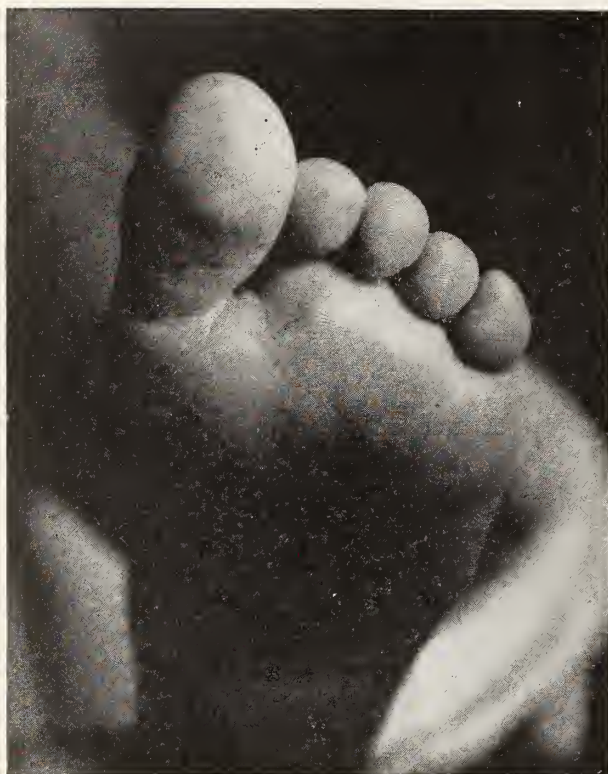


Fig. 1. I. F., school boy. Single wart, common site.



Fig. 2. H. K., school girl. Multiple warts, cured by X-ray.

case of plantar warts, may be considered a predisposing factor. There is no doubt that the clinical history of warts very strongly suggests an infection. Every physician has ample evidence of the auto-inoculability and contagiousness of warts. Chavarri and Shipley² cultured a fungus from warts. Judassohn³ produced warty lesions in 33 instances out of 74 inoculations in 6 adult patients, the incubation period being from seven weeks to three months. Similar observations have been made by other workers. Wile and Kingery⁴ in 1925 produced typical lesions of *verruca vulgaris* both clinically and histologically by injecting intra-cutaneously a sterile filtrate of wart material. Since then Dr. Wile has produced lesions in the second generation. The incubation period in these cases was from four to seven weeks.

THE SUPERSTITIONS

It is amusing to note that Dr. Bonjour⁵ (Germany) believes warts are due to psychic causes and he claims that he cures them

in a piece of paper and throw it over the left shoulder will cause a wart to disappear within 4 weeks. Another old superstition was to gaze at a new moon and, while gazing, pick up some dirt, rub the wart and toss the dirt over the left shoulder still looking at the moon. This was a sure cure. You can all recall people using a potato and the milk from a milkweed to accomplish the same result. Again some people believe that to touch a toad will cause warts.

THE DIAGNOSIS

Although plantar warts may be mistaken for callosities, the painful character of the former together with the typical appearance on removal of the horny covering, readily distinguishes the two. The infected wart, corn or callus may be confused with the "syphilitic corn"⁶ or "mal perforans." Consequently, according to Stokes, the pupils of patients with an infected wart or callus should be examined with the possibility of tabes in mind. In addition the

Keratodermic tertiary syphilide⁷ of the planar surface may be mistaken for possible ringworm or callosities of this area.

THE PATHOLOGY OF WARTS

Ormsby⁸ noted "that the chief changes histologically occur in the epidermis. The stratum corneum is greatly thickened. There is both hyperkeratosis and parakeratosis, as many cells still contain nuclei. The rete is thickened and marked down growth of the rete pegs (acanthosis) occurs. Mitoses are noted throughout its depth, particularly near the basal layer. The papillae are elongated in proportion to down growth of the rete pegs, but otherwise normal. Some cellular infiltration is present in the corium, but is not a prominent feature. Some difference of opinion has existed as to the starting point of the process." It was found by Wile and Kingery⁹ that the first changes were a localized acanthosis, confirming similar observations made by Unna and Auspitz.

Bowen¹⁰ found peculiar epithelial cell degeneration in certain cells of the rete in plantar warts.

THE TREATMENT

The treatment for plantar warts may be divided into three methods.

1. Local applications of plasters or pastes containing keratolytic drugs, the most popular one being salicylic acid. Markley's¹¹ method is the best of this class and is as follows:

He surrounds the area with simple colloid to protect normal tissue from continuous action of drugs. The thickened epidermis is cauterized with fuming nitric acid or strong solution of caustic soda until the callosity has been eaten away to the depth at which patient first complained of pain. The hole formed is filled with a 15 to 20 per cent salicylic acid ointment. This is covered by a felt corn plaster of nearly 3 inches in diameter having an aperture of about 1 inch. The crater is filled, after scraping the detritus gently away, every morning. It requires 7 to 8 days for cure.

2. The second method is by surgical diathermy. You can use either the monopolar or bipolar electrode. Some like the indirect method, that is having the patient hold the electrode, then use a pencil or applicator for directing the spark from the patient. The surgical diathermy procedure is practically painless if the operator has injected a local

anesthetic skillfully (we have found 2 per cent novocaine combined with a solution of adrenalin very satisfactory for this type of local anesthesia).

3. The third method is by radiation. The chief objection to methods one and two is the constant danger of infection. The location of plantar warts is very favorable for infection after any surgical procedure if the patient is permitted to go about his daily activities. If the patient can be put to bed, why of course this danger is practically eliminated. X-ray therapy for plantar warts is perfectly safe at the hands of an operator who is trained in roentgenology. The procedure is simple. The surrounding skin is screened to the edge of the lesion with the usual lead-rubber screen. Place target at right angle to wart at the required distance for whatever dosage is required, then run the machine for the necessary time interval. The unfiltered dose is used. For the exact technic for measuring X-ray doses we refer you to MacKee's book "X-rays and Radium in The Treatment of Diseases of the Skin." The dose necessary for the average wart is one and one-half skin units (MacKee's designation). This depends of course upon the amount of callosity present. If there is much horny tissue it may require two or more skin units of X-ray at one dose. If the wart has not disappeared by four weeks it is safe to give another treatment. If this is insufficient it is better to apply method number two. It is very satisfying to report that failures in the use of X-rays are few.

EFFECT OF X-RAY TREATMENTS

Hazen and Eickenlaub¹²—16 patients, 15 cured. Treatments ranged from 1 to 7. Dose $1\frac{1}{3}$ S. U. No recurrences.

MacKee¹³—treated 60 patients, 30 final results known. 20 were cured, 4 improved, 6 failures. Six cured—1 treatment, 1st dose 1 to $1\frac{1}{4}$ S. U. (Unfiltered). 2nd dose 2 S. U.

Fox¹⁴—reported that he cured 6 out of 9. Average number of doses 2. Total average dose $2\frac{3}{4}$ S. U.

Nancel-Pinard¹⁵—used X-ray treatment since 1907. Began using small dose, later larger, all unfiltered. $1\frac{1}{2}$ to $1\frac{3}{4}$ units according to MacKee's designation.

Jeffrey C. Michael,¹⁶ Houston, Texas, has had 90 per cent cures using X-ray. (In one case used as high as 2 to $2\frac{1}{2}$ S. U.)

Using $1\frac{3}{4}$ S. U. and not removing hyperkeratosis—66 per cent cures.

Radium also has been used with about the same results experienced with X-rays. The flat application is the most popular method of applying radium. A half strength flat glazed element, application screened with 0.1 mm. aluminum, in contact with wart for 15 to 30 minutes or even longer if there is much hyperkeratosis.

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MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Commissioner

LANSING, MICHIGAN

RESORT SANITATION

The summer of 1929 was the first season in which an attempt has been made to cover the entire state on resort inspection. Records of previous inspections and published lists of resorts were the only available basis for an estimate of the number of men necessary to reach all of the resorts of the state during the two months that they are open. The laying out of districts and itineraries was therefore very largely a matter of guesswork. The total of all known resorts at the beginning of the season was less than half of those actually found and inspected.

Six men made up the staff of resort inspectors, and the state was divided into six districts on the basis of known resorts. Work started July 1 and was finished between August 28 and September 7. A few days at the beginning of the program were given over to instruction of the men. This included instruction by two dairy inspectors from the Department of Agriculture in methods of inspecting and rating sources of milk supply.

A special resort blank was prepared to be filled out in the field. Instructions for improvements were given by the inspectors while on the ground whenever this could be done, and a stock of bulletins for distribution was carried by each inspector. Problems requiring engineering design and specialized advice were referred to the office. A report was mailed to the resort owner or

manager from the office, giving the rating of the resort. It appeared to be more satisfactory to express the rating in percentage form than by letters. Owing to the press of work in the office, the 1929 ratings were not mailed as early as they should have been. Arrangements have been made for 1930 whereby it is expected that the ratings will go out within a week or two after the inspections are made.

It was found during 1929, as in previous years, that the resort proprietors and managers welcomed the inspections and were very willing to coöperate in making any changes suggested. The educational value of the work was high. Many owners had not known that advice and service are available without cost from the State Department of Health.

It was the opinion of the inspectors that strictly resort hotels should be inspected by the resort inspectors because it is doubtful if the hotel inspectors reach such hotels. An effort will be made to determine more fully just what should be done in this respect without running the risk of duplication of inspections.

It appears that only a relatively small proportion of resort food handlers have had physical examinations, and it was suggested by the inspectors that this activity should be extended if possible.

Reinspection of resorts shows very definite improvement. One inspector reported 57

reinspections. At these places he had recommended 167 changes. Upon reinspection he found that 132 changes had been completely complied with and 18 partially complied with. In many of the cases where nothing had been done, the requirements were of such a nature that the improvements could not be made during the resort season.

Some of the inspectors reported the need for definite information to give out at bathing beaches regarding the satisfactory methods of disinfecting bathing suits. An effort will be made to furnish some reliable information on this subject during the 1930 inspections.

A comparison of inspections since resort work was begun in Michigan is as follows:

Year	Resorts	Countries
1913	77	11
1916	173	29
1917	48	15
1920	59	12
1921	134	10
1922	152	15
1928	225	24
1929	1663	68

E. D. R.

THE TRAINING STATION

The class of seven health officers and public health nurses that started work in the Training Station May 15 has been spending two weeks in the field, working with the Midland County Health Department. Lectures in the State Department of Health offices will begin as soon as the preliminary field trip ends. The whole course will occupy 13 weeks, with field work beginning and ending the course.

An interesting addition to the class will be the arrival, at varying times and for varying periods, of seven fellows of the Rockefeller Foundation. These men are assigned by the Foundation to receive practical experience in well organized and well conducted health departments before returning to their respective countries.

The group of fellows is to be made up of Dr. Selaheddin Bedri, Health Officer, Ministry of Public Health, Turkey; Dr. Victor W. Fenn, Assistant Bacteriologist, Harcourt Butler Institute of Public Health, Burma, India; Dr. Luigi Gabbano, Assistant Institute of Hygiene, Royal University of Genoa; Dr. Tahsin Sevet, Assistant in the Hospital Numune, Angora, Turkey; Dr. Krishnan Tampi, Health Officer of Trivandrum, India; Dr. P. G. G. Unnithan, Rural Sanitation Officer, Madras, India; and Dr.

G. S. Escoffery, Medical Director of Unit of the Hookworm Commission, Mandeville, Jamaica. All of these men have been studying at Johns Hopkins University for the past year.

QUADRUPLETS

The recent birth of quadruplets, all living, occurred at the Sparrow Hospital in Lansing. The birth of quadruplets is so exceptional as to create a good deal of comment and interest.

Plural births are not uncommon. In the past three years, in a total of 295,691 births in Michigan, there were 2,218 sets of twins and 27 sets of triplets. This is equivalent to one set of twins to 131 single births and one set of triplets to 10,785 births.

Michigan Department of Health records do not show the previous birth of quadruplets in this state, within the years for which this type of record is available. It is stated, however, in literature that there is one set of quadruplets approximately to 370,000 births. If this estimate is correct we would expect five or six sets of quadruplets to be born in the United States each year.

The very interesting part of the Lansing case is the fact that all of the children were born alive and at the time of this writing, May 24, are still living.

W. J. V. D.

CHILD HYGIENE ACTIVITIES

The study of births survived by the mother, planned to supplement the recently completed study of maternal deaths, is progressing rapidly. Already records have been secured on 263 cases. Both Dr. Knowlton and Dr. Alexander are working on the study, Dr. Alexander interviewing physicians in the Upper Peninsula, and Dr. Knowlton in the northern part of the Lower Peninsula.

The Mason County demonstration program of prenatal, infant, and preschool child nursing is well under way, with Sylvia Krejci, R.N., in charge. Kalamazoo County is having the same type of program, carried on by Nelle Lemmer, R.N.

Esther Nash, R.N., and Charlotte Ludington, R.N., are still in St. Clair County, assisting in the diphtheria prevention campaign. All of the clinical work is being done by local physicians. Payment is being made in various ways, in some cases by the

individuals immunized and in other districts by local agencies.

Ottawa County has the services of Caroline Hollenbeck, R.N., who is doing prenatal and infant nursing.

Annette Fox, R.N., and Julia Clock, R.N., are assisting Dr. Murphy in diphtheria immunization in Chippewa County.

Child Care Classes in Tuscola County, conducted by Bertha Cooper, R.N., are just being completed.

THE PLUMBING CODE

The proposed state plumbing code is now finished so far as the Code Committee is concerned. A meeting was held in Detroit on May 9 at which a committee of fifteen representing the building trades was

chosen and given authority to confer with the Michigan Department of Health on points still in conflict. The tentative date of May 29 has been set for the meeting of that committee with the Code Committee, and it is hoped that final agreement can be reached at that time.

DIPHTHERIA IMMUNIZATION IN CHIPPEWA COUNTY

At the request of the Chippewa County Medical Society, a physician from the Bureau of Preventive Medicine of the Michigan Department of Health was assigned to that county to assist in a diphtheria immunization program. Dr. W. J. Murphy has been in the county for the past three weeks, working especially in the rural sections.

PURE WATER AND TEMPERANCE

We pride ourselves on our advancing civilization and intellectual superiority, writes Dr. William J. Mayo. If we are to continue to advance, the public health service must be made the first function of the state. It is probable that neither prohibition propaganda nor an appeal to the conscience of man has caused the rapid advance of the temperance movement, but that pure water has made it possible. It is assumed that the drinking of spirituous and fermented liquors is due to an evil inborn longing, to be stamped out only by the exercise of individual self control. Is this true? In France and Italy the drinking of billions of gallons of wine saved the people from extinction; they could not have lived had they drunk their polluted water. The Teutonic countries turned to beer to secure a sterile drink; England had ale and wine, and temperance countries, such as Turkey, had tea and coffee. Simultaneously with Vienna's introduction of a pure water supply from the mountains, her per capita consumption of spirituous and fermented liquor was reduced 40 per cent. The introduction of a pure water supply in the various states in our own country has been followed by a temperance movement, and finally by prohibition. The drink habit is one of the many forms of individual protection resorted to by nature to save man from filth diseases which cause death, or that which is worse than death, intellectual deterioration. As pure water is introduced into the countries of Europe a temperance movement is at once manifest.—From Vol. XXI, Mayo Clinic.

GUARDIANS OF HEALTH

The members of the American Medical Association, whose eighty-first annual meeting opened in Detroit June 23rd, are in a sense the keepers of the nation's health. The importance of this trust may

be judged from the fact that one authority places the cost of illness to the United States at \$15,000,000,000 a year. Another has discovered that the popularly supposed inconsequential cold in the head alone takes a billion dollars out of the pockets of the United States and Canada annually. The doctors do not get all of the \$15,000,000,000. A large share of it represents the loss of wages through sickness, which bears heavily on the economic life of the country.

The annual illness bill the American people has to foot is appalling; but it would be far more staggering if it were not for the unceasing war on disease that the medical profession has waged for centuries. The present state of medical knowledge has been attained by sacrifices which, if less spectacular than those of the battlefield, were far more noble. They aimed to save life instead of to destroy it. Surgeons and physicians have had to contend with both secular ignorance and religious prejudices. They were obstructed in their early attempts to reduce infantile and maternal mortality by the Genesis idea that the agonies of childbirth were a God-sent punishment for Eve's disobedience. Our own colonial ancestors thanked God for sending smallpox into their families to try them! A hundred years ago medical schools in this country and Great Britain had to depend largely on rifled graves for the anatomical material with which to teach surgery.

Against all these handicaps and obstructions the medical profession has had to wrestle. Superstition and ignorance and indifference to health matters have not altogether disappeared. This should be remembered in attempting to measure the achievements of the medical profession in terms of national health. There is no virtue or compliment in welcoming the doctor when one is ill; but it is both a pleasure and a compliment to welcome him when one is enjoying the best of health, as Detroit does today.—*The Detroit Free Press.*

THE JOURNAL

OF THE

Michigan State Medical Society

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All communications regarding advertising and subscriptions should be addressed to F. C. Warnshuis, M.D., 2429 University Avenue, St. Paul, Minnesota, or Suite 1508 Grand Rapids National Bank Bldg., Grand Rapids, Michigan.

JULY, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

MEDICAL HISTORY OF MICHIGAN

Those who have subscribed for the Medical History of Michigan have received Volume 1. Considering the immense amount of work in completing this volume even after the copy was in the hands of the printer, the publisher as well as Editor Burr is to be congratulated. There is an immense amount of proof reading and indexing in an eight hundred page book. Proofs need to be revised several times in order to insure a proof perfect volume.

An excellent review of this work by Dr. J. B. Jackson, president of the Michigan State Medical Society at the time the idea of a medical history was conceived, appears in this Journal so we will not make any extended comment on the volume itself further

than saying that it is a credit to both the editor and author as well as the publishers. Every doctor in the state of Michigan should number this set among the volumes of his library. He may be one of the older physicians who has been a spectator of many of the events recorded as they occurred during his lifetime, or he may be one of the younger men who has been in practice only a few years to whom the History of Medicine in Michigan is an entirely new and to the present moment a closed volume. Both will find this work of interest and value. A medical history is the only work in the doctor's library that does not need revision every five years. A work on medicine or surgery is old in five years, obsolete in ten and ancient in fifteen. The data of medical history are of perennial freshness. If you have not already subscribed for these two volumes, send your check for \$10.00 immediately to the secretary of the Michigan State Medical Society.

The second volume is practically in type and will be ready for distribution early next fall. The publisher is the J. R. Bruce Publishing Company of Saint Paul, Minnesota, also the printers of this Journal.

POST-GRADUATE MEDICINE

The third annual post-graduate course given by the Department of Post-Graduate Medicine of the University of Michigan was held in Detroit at the Receiving, Harper, Children's, Grace, Herman Kiefer and St. Mary's Hospitals, June 2 to June 21 inclusive. The general division into internal medicine and surgery was observed. Practically every special field was included but the object was to deal more or less exhaustively with special subjects such as goitre, endocarditis and diabetes, rather than attempt a systematic course in cardiology or constitutional diseases. All hospitals furnished an abundance of illustrative cases. The clinical work consisted of the small bedside group, though the demand for this work has become such that the groups as witnessed by the writer were about as large as could be well accommodated.

Post-graduate instruction in the medical sciences has become an established institution in this state due in no small measure to the foresight and the untiring efforts of Dr. J. D. Bruce, Director of the Department of Post-Graduate Medicine of the University of Michigan. There is no better way to

combat cultism than through scientific preparation for his work on the part of the regular practitioner.

THE AMERICAL MEDICAL ASSOCIATION

The great national organization of American physicians and surgeons has just closed its annual convention in Detroit. This is the second time within less than a quarter of a century that this state and particularly Wayne County has been the hosts of the national organization. Since the meeting here in 1916 medical science has progressed more rapidly than any other similar period in its history. The irresistible trend towards specialization is seen in the fact that at the Detroit meeting there were fifteen scientific sections representing the specialized departments of medicine and surgery. Over three hundred papers were presented, making readily available to all interested the results of the past year's study and research.

A noteworthy feature of the national convention was the scientific exhibit where visual education was a very commendable factor. Someone has said that one picture or specimen is worth a thousand words. The scientific exhibit at the Detroit session represented perhaps the most complete feature of its kind in the history of the Association as there were over one hundred and fifty exhibits and demonstrations. Among these were group exhibits on varicose veins, biochemical methods, fractures, besides demonstrations by many of America's noted pathologists. The attendance at this feature of the Association's program was large and constant.

The attendance at the annual meetings makes it evident that the medical profession look upon this as the outstanding medical event of the year. Its central location made it possible for a large attendance at Detroit. The committee on arrangements representing the Wayne County Medical Society are to be congratulated on the rôle of host it was called upon to fill. Nothing was wanting to make the event a success from the social as well as scientifically profitable viewpoint.

CHRONIC CONSTIPATION

The very interesting dissertation on physiologic considerations in the treatment of chronic constipation which constitutes the first article of this number of the Journal of

the Michigan State Medical Society, was presented over a year ago at a joint meeting of the American Proctologic Society and the Wayne County Medical Society. As it appears here it has been thoroughly revised and represents the author's position at the present time. Dr. Bastedo is one of the leading proctologists in this country and author of a well known treatise on the subject. The paper it is our good fortune to present to our readers is virtually a small monograph on the subject. It gives in comparatively small compass a subject which has a voluminous literature and the presentation is by a master.

In addition to a discussion of the physiology of the colon we have a presentation of the pharmacology of drugs and other agents that are commonly used in the treatment of the often stubborn condition—chronic constipation.

The subject should have a broad appeal, including the surgeon in the various specialties as well as the internist. Often desirable results in the treatment of specific conditions are retarded or impossible while chronic constipation persists.

ONE LICENSING BOARD

Often those outside a particular profession are in a better position to discern its merits and shortcomings than the members themselves. Not infrequently have reforms resulted from criticism and suggestions from those who from a distance are in a better position to judge than those, so to speak, in the very midst. The high standards of medical education, however, have been achieved largely from within the ranks of medicine. Now comes the suggestion that since education in medicine, law, engineering, pedagogy, have come to be recognized as a state function and that in two of these at least the state reserves the power to grant license to practice, why not the entire power to grant such licenses be vested in some such body as the state University, the department of public instruction or state board of education or a committee consisting of school superintendents—any one of these organizations would be neutral as to the methods of practice, competent to pass upon educational qualifications and should be glad to help in safeguarding the interests of the public. Surely the matter of care of the sick is as important as the education of

the youth of the land. The state University, Michigan State College as well as important colleges not dependent on state aid are governed by high grade laymen; they have proved themselves so efficient in the conduct of our major educational institutions that they might be entrusted with the entire function of granting or withholding license to practice as in the case of the teaching profession. Teaching, medicine and the other professions have become so largely scientific that the licensing function could be performed very satisfactorily by a commission or board of the same standard, for example, as the board of regents of the state University. Such a movement would eliminate faddism in the various professions. As a profession we should not lightly dismiss the suggestion that all candidates for admission to the callings which are concerned with the health of the people, and this includes all the so-called healing cults, be placed under such lay control as suggested. Preventive medicine is already under state control with the coöperation of the private physician. Let us not be misunderstood, the proposition has not the remotest relation to "state" medicine so-called.

OURSEL'S AS OTHERS SEE US*

A prominent English psychiatrist visited the United States some time since and returning to his native land wrote down his impressions of psychiatry in this country. In the first place he notes that there is no federal unity or that there is a total lack of coördinating of psychiatric arrangements among the different states of the union or the provinces of Canada. The nearest approach to any unifying organization is the National Committees of Mental Hygiene, unofficial bodies financed largely from voluntary sources. The writer avows that the purpose of his visit to America was to see all that was best and most interesting. In the parts of the United States visited he saw, "an amount of psychiatric research in progress that could not possibly be equalled in a similar tour of Great Britain." The writer noted four main factors which constituted the outstanding differences in psychiatry in America as compared with that of England. The first is the enormous growth of population, which meant that in-

stitutional provision for mental disorder tended to be inadequate. This shortage was not an unmitigated evil for it resulted in extra-mural activities on the part of State hospitals and State schools. Of course the condition of shortage of Institutional provision for the mentally defective led to an over-crowding, to incarceration in jails and very frequently to premature discharge of patients simply to make room for others.

The second feature noted was the extent to which official provision at public expense is supplemented by bequests, donations from such sources as the Commonwealth Fund and the Rockefeller Foundation.

The third observation that the visitor makes is the degree to which "the American psychiatrist is master in his own house—a degree which is unthinkable in our lawyer-ridden land [England]." The replacement of the static mind of the lawyer by expert knowledge and the experimental spirit is, in the opinion of this English psychiatrist, the great guarantee of the future of America. He speaks in particular of the Recorder's Court of Detroit, where a complete psychopathic clinic has been recognized and employed by the Judges of the Court for opinion as to responsibility of the alleged culprit before trial, and after verdict but before sentence, as to which it should be, a commitment to prison or reformatory and for how long, or whether on the other hand the accused should be placed on probation with supervision. Judge Frank Murphy of the Recorder's Court, Detroit, states that he has found the psychiatric clinic invaluable as a guide in the disposing of cases that come before him. It would seem that abstract justice will be more nearly achieved when judges seek that knowledge which is to be had from cultured disinterested groups no matter what the subject under litigation.

Our psychiatric visitor is of the opinion that there is a far wider diffusion and a much higher level of psychiatric education here than in his own country, with the result that there is a greater tendency in the United States to look upon mental disorder as a problem to be solved rather than a burden to be borne. Regarding undergraduate instruction in psychiatry he claims that there is no university or medical school in England which approaches in thoroughness that which is universal in at least ten American universities.

*Impressions of Psychiatry in America by Edward Mapother, M.D., F.R.C.P., London, *The London Lancet*, April 19, 1930.

CANCER "CURES"

The announcement that Drs. Coffey and Humber of San Francisco have been treating persons suffering from malignancy by injecting a glandular extract presumed to have deleterious affect on cancer tissue, has resulted in thousands of communications and numerous visits of sufferers to the offices of these western surgeons. Before the Senate Commerce Committee at Washington, Drs. Coffey and Humber declared that more than 1,300 persons suffering from the last stages of presumably incurable cancer have been subjects of their experimentation. They insist that their work is purely experimental; that it is based upon a study of the sympathetic nervous system and the ductless glands in an effort to find a stabilizer of tissue growth.

Of the 1,300 persons receiving the treatment during the past three years, only 15 are reported to have died. The attitude of these two western surgeons is commendable inasmuch as there has been no attempt on their part to commercialize their work. Neither doctor has accepted any fee for the injections and neither has promised results. Both have discouraged patients who would be willing to travel across the continent as the subjects of experimentation.

Probably there is no other pathological condition in which the laity have become more "disease conscious." Neither pneumonia, appendicitis, nor any other disease condition is feared to the same extent as malignancy. In all other conditions the victim feels that there is left at least a fighting chance. In the case of malignant disease he grasps at the straws of promise without the least critical attitude towards the source. This condition of mind has rendered the treatment of malignancy a fruitful field for quackery throughout the centuries. It behooves scientific medicine to be very careful in the matter of weighing claims of suggested forms of treatment.

The cautious scientist, says Dr. Francis Carter Wood, referring to the Coffey-Humber treatment, asks, since we all have adrenals which give off a chemical substance to the blood, why should cancer ever develop if this substance has a curative effect? It is strange that cancer should grow in the adrenals whence this "healing substance" is derived. All attempts so far to find a cure for cancer have failed. "The reason for this failure," according to Dr.

Wood, "is that the human being suffering from cancer has a disease in which the growing tumor is composed of cells from his own body, and hence these cells are perfectly adapted to the situation and are quite equivalent in many cases to the structures from which they arise. To destroy that tumor by serum or gland extract means that one runs the risk of destroying the healthy cells in the body. This is just what is observed."

ILLUSTRATIONS

The attention of prospective contributors has been called to the matter of illustrative material for their papers. Let us repeat, it is impossible to reproduce anything in color in the process of half-tone copper etchings such as used in the Journal of the Michigan State Medical Society. Sometimes line drawings and charts are submitted which are approximately eight by ten inches or larger; when an illustration of such size is reduced to single column width, the lines and other points are so much reduced as to be not much more than visible. Radiographs unless particularly well made should not be used. A positive print contains less detail than the original radiograph. The reduced cut from the print is apt to show much less, unless the X-ray negative is particularly good to start with. Attention is called to the conditions pertaining to the publishing of illustrative material, see title page of the Journal.

GOOD ADVICE

If you have a thing to say,
Cut it down!

Something you must write to-day,
Cut it down.

Let your words be short and few,
Aim to make them clear and true,
Monosyllables will do.

Cut it down!

Are you writing to the press?

Cut it down!

Make it half or even less,

Cut it down!

Editors like pithy prose,

Lengthy letters are their foes,

Take a hint from "One Who Knows."

Cut it down.

—Grenville Kleiser in the *Paris Herald*.

ROBERT BRIDGES

(LONDON LANCET)

The death of Robert Bridges, physician and poet-laureate, at the age of 85, brought to an end an interesting career—especially interesting because the finest flower of his intellectual achievement did not blossom until his last year. An uninformed reading of his life would lead to the idea that he

drifted from medicine because he was unfitted for its pursuit, and that when he discovered his *métier* as poet he was too aloof and too severely artistic to be the interpreter of ideals which would inspire a work-a-day world. Robert Bridges, as a matter of fact, was a successful physician before he allowed the influence of classical studies at Eton and Oxford, and the urge, gradually growing in intensity, of poetic production, to detach him from our ranks. And although much of his poetry was directed to an audience composed of the highly educated, and even of the severely cultivated, neither its melody nor its teaching asked for any extraordinary intellectual grasp from the reader. And the fervour and patriotism of his singing was slowly making appeal to an increasing number of readers when last year he published the lovely "Testament of Beauty," wherein deep religious feeling was blended with the humanism of medicine and a knowledge of its fundamentals. In Robert Bridges all medicine had a great colleague, and its followers may well regret that his long life is closed.

[The Late Poet-Laureate of England was called to Ann Arbor, where he lived a year under the late President Burton's term as president.—Editor.]

LORD BALFOUR ON GROWING OLD

(MANCHESTER GUARDIAN)

In the light of his achievements during recent years it is interesting to recall today the terms in which Lord Balfour announced his resignation of the leadership of his party in 1911. He wished, he said, to leave that position of heavy responsibility before he could be "suspected of suffering from the most insidious of all diseases, the disease which comes upon those who, without losing their health or their intellect, nevertheless get somewhat petrified in the old courses which they have pursued, whose authority grows because they have been long in the public service, or have been great men of science or business or whatever it may be, but who cannot deal with the great problems which in this changing world are perpetually arising with all the freshness and elasticity really desirable in those who have to conduct great concerns."

He added that no man ever knew in himself when that moment had come. The sort of malady of which he was speaking might attack people who were in the prime of life and of intellectual vigour as long as the intellectual vigour was exercised along the old lines, but who nevertheless were less capable of adapting themselves to the changing circumstances of life than those who were of less authority because younger, and yet were more capable also because younger. "I am vain enough to hope," he said "though no man can tell, that I have not yet reached that period, but I should be miserable if I ran the margin fine."

STATE MEDICINE NOT POPULAR

(THE NEW YORK TIMES)

At the closing session of the meeting of the American College of Surgeons in Chicago, Dr. Glenn Frank, president of the University of Wisconsin, told the assembled doctors that education of the public to a program of disease prevention is the outstanding need of the profession at present, asserted that otherwise agencies, such as insurance companies, industrial concerns, and even the government, may "step in and eliminate the private practitioner," and affirmed that the medical profession "must change the American mind so that the private doctor will be consulted at regular intervals in a sickness prevention program."

Just how any outside agency in this or any other country is going to "eliminate the private practitioner" without plunging society into the hopelessly un-

defended condition in the face of disease, which it occupied a century or two ago before the rise of modern medicine, we must leave Dr. Frank to imagine. The idea that government in this country will ever take up the control and practice of medicine is rather grotesque. State socialism may be popular in Wisconsin, but elsewhere it isn't.

As for the rest, who else but the physicians and surgeons of America have for years been pleading with members of the lay public to submit to periodical physical examinations, particularly after reaching middle age? Who but the doctors have warned against neglect of illness, have emphasized the importance of early treatment, and in season and out of season had told patients and public that the wages of self-neglect is suffering and death? Who have preached the gospel of clean, temperate living and rational habits, who else but the men and women with M.D. after their names?

The intimation by President Frank that modern doctors as a whole are indifferent to their opportunities and responsibilities to society, seems to us uncalled for and unjust. It is true that a doctor cannot insist too far. If he does, he at once lays himself open to a charge that he is "drumming up trade" and capitalizing the fears of patients. He has to be careful. About all he can do in many instances is to present facts, and leave the rest to the good sense of the layman. And that is all he is in any way morally bound to do.

WHY PATIENTS COMPLAIN

(OHIO STATE MEDICAL JOURNAL)

Rene Pnaux, French journalist, following a recent visit to America, wrote several articles setting forth his impressions of the New World, which he termed a "country in the making" and "in the full crisis of growing, with all the exaggerations and worries of adolescence."

One observation made by Pnaux seems to sum up the economic situation faced by America, as he sees it at least, and deserves consideration by those who are interested in and attempting to solve some of the economic and social problems of the period.

"I was somewhat horrified at the present methods of existence of a countless number of Americans who buy anything and everything on credit; looking for the morrow to bring in the dollars that they have spent the day before, accustomed to the idea that it is normal not to deprive themselves of anything," writes the French fourth-estater.

"This doctrine of 'living well' has determined the continual rise of salaries, and the corresponding increase of the cost of living, the social inflation which is just as dangerous as the financial inflation," he added.

In other words, Pnaux believes that Americans are living beyond their means and therefore violating a fundamental principle of sound economics.

The physician sees evidence of this "social inflation" daily in his care of the sick and injured. Any practitioner numbers among his patients those who ride in expensive automobiles; listen to costly radios; expect high-priced hospital rooms and specialized medical service, and attire themselves in the most expensive garments, demand all the "extras" and luxuries, but who protest vigorously when confronted with a moderate bill for medical, surgical and hospital services.

Countless Americans have as yet failed to recognize the difference between the luxuries and necessities of life. There is little hope of solving the so-called problem of cost of medical care, until the public begins to realize that medical service is one of the necessities of life and that every family must prepare to pay for it on the same basis as it pays for its other necessities and customary comforts.

SOCIETY ACTIVITY

ANNUAL MEETING

Our annual meeting will be held in Benton Harbor, September 15-16-17. The August Journal will contain the preliminary program and feature announcements.

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC EDUCATION HELD AT THE

Michigan Union, Ann Arbor, Friday, May
16, 1930, 12:15 P. M.

This meeting was held in conjunction with a special meeting of the Medical Society, including the Medical Council. The following members of the Joint Committee and guests were present: Drs. Warnshuis, Dempster, Lyons, W. R. Davis, Huber, Sundwall, Bruce, Henderson, Isaminger, MacCracken, Stapleton, Ricker of Cadillac, Boys and Crum of Kalamazoo, Corbus of Grand Rapids, Stone of Battle Creek, and Sawyer of Hillsdale, Miss Emilie Sargent representing the Nurses Association, and Miss Lera B. Curtis representing the Department of Public Instruction.

1. Report of the minutes of the last meeting.

2. Report of the Secretary. Mr. Henderson gave, first, a brief account of the health education activities up to date, the following tentative report regarding health lectures being included:

Number of schools taking part.....	106
Number of doctors and dentists taking part in the program (134+30).....	164
Total number of lectures given before high school assemblies.....	476
Total number of lectures given to P. T. A's and other organizations.....	102
Approximate number in attendance upon lectures (140,600+14,016)....	154,616
Number of different high school students	30,000

Second, he called attention to the Joint Committee Trust Fund, which is deposited with the Treasurer of the University. It was suggested that this fund be made available for such Joint Committee activities as might arise, withdrawals from the fund being subject to requisition of the Secretary of the Joint Committee. On motion of Dr.

Warnshuis the Secretary of the Joint Committee was authorized to draw upon the Trust Fund for such Joint Committee purposes as might be deemed desirable.

Third, it was pointed out that there was a discrepancy between the statements made in the bulletin regarding traveling expenses incurred by members of the Medical Society, and the rules governing the payment of these expenses as authorized by the Medical Council. When the Joint Committee was organized it was stated in the bulletin that each unit member of the Committee would pay the traveling expenses of its own members. It appears that later on the Medical Council passed a resolution to the effect that it would meet only one-half the traveling expenses of those of its members who gave health lectures. This information, however, was not transmitted to the Secretary, and consequently the bulletin as published at the present time contains the original statement. It was moved and carried that the bulletin should be revised so as to conform with the rules as established by the Medical Council.

3. Report of the field work by Dr. Isaminger.

This is the close of the fifth year of the Health Education Program in the schools, the major project sponsored by the Joint Committee. Since the program was started in Detroit during the school year of 1925-26 the work has grown to the point where there is a problem of administration with the present staff.

During these five years other agencies have demonstrated more interest in health instruction and the schools themselves have progressed in the conduct of modern health education programs. The schools in general are not dependent upon the Joint Committee as they were previously. The Committee still has an important function to perform which will be more along the lines of maintaining the interest, now at a high level, promoting new programs and stimulating health education activities among schools, adult groups, such as Parent Teacher organizations, and the industrial population.

In the past the larger schools have profited most from the health lectures. The health work in these schools has also developed rapidly while the rural school has advanced slowly in this direction. Should the Joint Committee recognize this change and shift its center of attention to the smaller towns? Your field representative is of the opinion that a policy of this kind should not be stressed. The reasons are as follows:

(a) Expense is less in the cities. The cost of conducting the program in the cities in southern Michigan is very much lower when considering the returns in terms of number of lectures delivered and the number of pupils reached.

(b) More speakers in cities. Speakers are better and more accessible in the cities. Providing schools with high class speaking talent is not a problem of any magnitude in the larger communities. There are more doctors from which to select a satisfactory speaking staff.

(c) A natural trend toward smaller towns without stressing. There will be a tendency to take on

more small towns in the future because of the developments in the larger cities. We will be forced to do this if we wish to go on, without stressing it. If the program continues to grow it is obvious that efforts will bend more toward distant areas.

(d) Best reports come from the cities. The most satisfactory reports come from the Principals of the schools in the cities. The work has shown greater improvement there. For example, after five years in Detroit the school administrators have indicated their desire to continue.

Eight new counties participated in the regular program during the year, while special lectures were given in several others not on the list in previous years. During the year health lectures were given in connection with high school assemblies in 25 counties, including 106 high schools.

Some towns in the Upper Peninsula were desirous of obtaining the lecture service, beginning with the fall of 1930. Very little has been accomplished because of the distance from the University. They have depended chiefly upon Professor Henderson for educational talks. Prospects are excellent for the extension of the program to include two or three counties in this region.

The Coming Year. Instead of hurriedly covering the territory, as many as seven towns a day in some instances, in order to have the program started as soon as possible to avoid bad roads in the counties, the writer proposes to arrange a lecture in each school by correspondence for the month of October, if possible for November. This will permit ample time for the remainder of the schedule to be arranged by personal contact and the program will be under way early. This plan will result in more careful consideration to local programs and in addition, the field representative can take the time to give a lecture, preferably an illustrated one, at the school he visits. Heretofore, the first month or more of field work was given over entirely to the making of schedules.

The physician and dentists deserve to be mentioned most favorably. There has always been the highest interest and earnest cooperation among them. Your field representative appreciates their sincerity and helpfulness.

In conclusion, a better type of lecture will be demanded as time goes on. We should make every effort to consider each lecture as an important assignment. The placing of the speaker before groups to which he is accustomed would be something to keep in mind by the field representative.

As a general thing, fewer talks should be given in any one school, but better ones. To this end, there should be some organization in the county. Perhaps a committee consisting of a representative of the County Medical Society, a prominent Superintendent of schools, and a public-spirited woman would tend to stimulate and maintain interest in the program. The woman might serve as a secretary, in which capacity she would arrange for lectures and make out schedules.

As soon as it can be done, a full-time director, well known among the physicians of the State, should be appointed.

4. Report of the Essay and Poster Contest. The Poster and Essay Contest conducted by the Extension Division and the Joint Committee on Public Education enlisted the cooperation of an increased number of high schools during the present year.

Of the 106 schools participating in the health program, a total of 34 took part in either the essay or poster features of the contest. One hundred forty-nine posters and 36 essays were submitted this year as against 62 posters and 25 essays last year.

The feature of the contest which seems to attract the greatest amount of attention is the annual display

of posters at the time of the Schoolmasters Club. About 100 of these high school posters were put on exhibit in the office of the Recorder during the week of the Schoolmasters Club. This exhibit attracted wide attention among students of the University, visiting teachers, and members of the Faculty.

The committee which judged the posters consisted of Professor H. A. Fowler, Mr. R. T. Bittinger of the School of Architecture, and Dr. P. M. Hickey of the University Hospital. Professor Fowler, who served as chairman of the committee judging the posters, has this to say regarding the work done by high school students during the present year: "The quality of the posters seemed in general to be higher than last year. The jury, however, was confronted with the same task of selecting between clever ideas poorly presented and mediocre ideas beautifully presented."

The committee in charge of judging the essays consisted of Dr. James D. Bruce, Mr. Ralph Johnson of the English Department of the Engineering School, and Professor Kenneth T. Rowe of the Rhetoric Department. The report of this committee is not yet available, due to the fact that the grading of the essays takes considerable time.

The Poster and Essay Contest, the annual exhibit of posters at the time of the meeting of the Schoolmasters Club, and the publication of the bulletin containing the winning essays and posters has done a commendable service in advertising the health lecture program conducted by the University and the Joint Committee. The bulletin alone was responsible for numerous letters which came to the Extension office from all over the State, requesting the privilege of participating in the health program. There seems to be no doubt that the bulletin should be published again. If the winning posters could be reproduced in colors the bulletin would be much more attractive and the writer sincerely hopes that enough money will be available to make this possible. The cost of 7,500 copies of the first Health Education Program Bulletin, which included the prize-winning essays and posters was \$181.51. Professor Fowler estimates that the four posters could be included in this year's bulletin in colors for \$50 extra, thus making the entire cost of the bulletin approximately \$235. If it is deemed inadvisable to use colors in reproducing the posters, the writer recommends the use of half tones rather than zinc etchings, in order that the drawing may stand out in clear relief.

C. A. FISHER,
Assistant Director,
Extension Division.

In connection with this report the Secretary was authorized to draw upon the Treasurer of the Joint Committee fund for \$100 for the Essay and Poster prizes, covering the present year's contest. He was also authorized to draw upon the Treasurer for \$200 for the publication of a bulletin descriptive of the Essay and Poster Contest.

5. Report of the Publicity Committee. Dr. Bruce, Chairman of the Publicity Committee, gave a brief outline of the publicity program carried out under his direction. He pointed out certain advantages and also certain difficulties which present themselves in connection with this activity. He stated that there are three possibilities for action

in connection with newspaper publicity. The first is to continue the present program, depending upon contributions from the various unit members. The second policy would be to publish the Joint Committee health column in conjunction with some of the larger newspaper syndicates. He advised against this, however, because of the fact that if such a policy would be adopted, the Joint Committee would lose its identity. The third possibility was to induce some Foundation interested in health education to cooperate so far as the supply of funds is concerned, with the understanding that certain specified daily newspapers of the State would be selected as a medium of publicity, the Foundation in question meeting any deficit. In conclusion, he moved that a committee of three be appointed with power to act, to confer with him in solving the publicity problem, this committee to report at the next meeting. President Ruthven appointed Drs. Jackson of Kalamazoo, Lyons of Ann Arbor, and Henderson to act on this committee, it being understood that Dr. Bruce was to be an ex-officio member of the committee.

6. Report of the Treasurer, by Dr. Warnshuis of Grand Rapids. Dr. Warnshuis' report, covering the period from November, 1919, to May 14, 1930, is as follows:

RECEIPTS		
Balance from 1929.....	\$1,486.23	
January, 1930—Detroit News.....	40.00	
G. R. Press.....	90.00	
Detroit News.....	40.00	
G. R. Press.....	112.50	
February, 1930—Mich. Hospital Assn.	100.00	
G. R. Press.....	90.00	
Detroit News.....	50.00	
March, 1930—Univ. of Michigan (1929)	500.00	
Dental Society (1929).....	500.00	
Detroit News.....	40.00	
G. R. Press.....	90.00	
April, 1930—Detroit News.....	50.00	
G. R. Press	112.50	
		\$3,301.23
DISBURSEMENTS		
January, 1930—Salary checks.....	\$ 183.33	
Neostyle.....	90.00	
Alumni Press.....	125.00	
February, 1930—Salary checks.....	183.33	
Don C. Lyons.....	58.00	
March, 1930—Salary checks.....	183.33	
April, 1930—Salary checks.....	183.33	
Alumni Press.....	125.00	
May, 1930—Salary checks.....	183.33	
Alumni Press.....	8.75	
		\$1,323.40
Cash on hand May 14, 1930.....		\$1,977.83

7. Report of lecture outlines for next year. After a brief discussion of the outlines submitted, by Drs. Warnshuis and

Huber, it was moved by Dr. Warnshuis and seconded that the publication of the outlines, as corrected, be authorized.

8. Moved by Mr. Henderson and carried that the Joint Committee recommend to the President of the University the appointment of Dr. Bruce to take the place on the Joint Committee made vacant by the resignation of Dr. Cabot.

9. It was moved and carried that the next meeting be held in Ann Arbor next fall, subject to the call of the Secretary.

W. W. HENDERSON,
Secretary.

WHY A VACATION?

Our habits of work and recreation are to a considerable extent influenced by the seasons, and we are now entering upon the period which suggests the possibilities of relaxation from the stress of daily toil.

Books will be put aside by the children, teachers will suspend the supervision of the plastic minds, professional and business men will steal away for such time as may be possible and general efforts will be made to enjoy the freedom from daily business in preparation for another period of the routine of life.

The favorite order of the doctor is a change of scene and activity for the ambulant patient for he knows that this is usually more acceptable than prescriptions for drugs, physical therapy or investigation by the various technical procedures, but with this should go suitable advice about the unseen dangers of unfamiliar environment and caution about the amount of exercise which is prudent and will not impose undue strain on the bodily mechanism. A vacation is of value insofar as it brings power of accomplishment. It is deleterious if it in turn requires a period of recuperation from over strenuous activities.

In giving advice with respect to vacations the doctor may here as at many other periods of his life stop and ask himself whether he should take his own prescription. If he finds an affirmative answer in his own consciousness of flagging interest in his work it may be well to have the matter decided by conference with a colleague and avoid the likelihood of having a fool for a patient. Perhaps he has found that the majority of his patients can do more and better work in eleven months than in twelve, but has never applied this knowledge to himself. If he practices that which he preaches his influence may be greater.

It is probable that the average life span is longer among the vacation groups and when it comes time again to invite the old doctors to augment some emotional appeal perhaps those who have taken care of themselves will be on the honor roll in larger numbers.

The great medical and educational activities of the first half of the year are practically over and we are pleased to wish our friends pleasant and profitable vacations.—*New England Journal of Medicine*.

GENERAL NEWS AND ANNOUNCEMENTS

Dr. G. M. Byington of Charlotte is taking a post-graduate course at Harvard Medical School.

Dr. Charles W. Heald of Battle Creek has returned from a six months' graduate study at medical centers in Europe.

The ninety-eighth annual meeting of the British Medical Association will be held in Winnipeg, Canada, August 26th to August 29th.

A splendid review of the Medical History of Michigan by Dr. J. B. Jackson of Kalamazoo, appears in this number of the Journal. See page 542.

The sympathy of the medical profession is accorded Dr. J. B. and Mrs. Jackson of Kalamazoo, Michigan, in the death of their youngest daughter.

Now that the annual meeting of the American Medical Association is passed, the next place and date of importance in the annals of medicine of this state are Benton Harbor, September 15-17.

Dr. G. Van Amber Brown of Detroit was speaker at a testimonial dinner held at Cincinnati on May 21 in honor of Dr. Charles L. Bonifield. Dr. Brown's subject was, Dr. Bonifield, Surgeon and Gynecologist.

Dr. Charles Singer of London, England, who is one of the most noted medical historians in the world, delivered an address on May 21 before a scientific gathering at the University of Michigan. The address dealt with pre-Renaissance science.

Dr. and Mrs. J. D. Bruce of Ann Arbor leave for Europe on July 1st. They will sail on the Empress of Australia which leaves Quebec on July 2d. While abroad they will spend their time principally in Edinburgh, Scotland, and in London, England.

Dr. R. L. Dixon, who has been superintendent of the Michigan Farm Colony for Epileptics at Wahjamega, Michigan, has been appointed Medical Superintendent of the Michigan Home and Training School at Lapeer to succeed the late Dr. William J. Kay.

Dr. E. G. Ahrens has resigned his position as chief of the Oakland County Tuberculosis Sanitarium and has been succeeded by Dr. A. B. Werner. Dr. Ahrens leaves in July for an extensive trip to Europe where he will visit the clinics of Vienna and Switzerland.

Dr. Walter R. Parker of Detroit, Professor of Ophthalmology in the Medical Department of the University of Michigan, will be a visiting lecturer at the first annual summer graduate course in Ophthalmology of the School of Medicine and Dentistry, University of Rochester, New York, from August 4 to 8.

Dr. Malcolm H. Soule of the Department of Bacteriology of the University of Michigan addressed the Washtenaw County Medical Society on June 9 on the subject of Some Recent Advances in Immunization. Dr. Soule has recently returned from France where he has taken special work embodied in the subject of his address.

Dr. Walter J. Wilson of Detroit spoke on the subject of Rheumatic Heart Disease before the June meeting of the Calhoun County Medical Society held at the Post Tavern, Battle Creek, on June 3. Dr. Wilson's subject was based upon a study of one hundred cases of rheumatic fever with special reference to the cardiac involvement.

The Grosse Pointe Medical Club was recently organized by the Doctors with offices in Grosse Pointe Township, which includes the four Grosse Pointe Villages and Lochmoor. Meetings are held once each month. Dr. B. H. Warren, who has been Health Commissioner of Grosse Pointe District the past twelve years, was made President.

Dr. and Mrs. William J. Stapleton and family of Detroit sailed for Hamburg, Germany, on June 26. From there they will visit Jena, Weimer, Berlin, Wurzburg, Oberammergau and the hill towns of Italy and Rome. Dr. Stapleton has shipped his automobile to Europe and will visit the places mentioned by motor. This is his eleventh European vacation trip.

The annual meeting of the American Association for the Study of Goitre will be held in Seattle, Washington, on July 10 and 11 and in Tacoma, Washington, on July 12. It is announced that the program will be supplied by thirty-four speakers, all of whom have a national reputation. The Association is represented from this district by Dr. Frederick A. Collier, Professor of Surgery of the University of Michigan.

The Detroit and Cleveland Roentgen Ray Societies met in a joint meeting at Toledo on May 22. The afternoon was spent at golf. After dinner in the evening a paper was presented by Dr. B. R. Kirkland of Rochester, Minnesota, on the subject "Roentgen Manifestations of Giant Cell Tumors." Dr. Otto Glasser of Cleveland read a biographical sketch of Roentgen and Dr. William A. Evans of Detroit presented to the Mayo Clinic a bronze bas relief of Roentgen. The gift was accepted by Dr. Kirkland on behalf of the Mayo Clinic.

Detroit can boast of being the fountain-head of one international medical society that has enjoyed a successful career. The American Radium Society was organized in this city on the occasion of the last visit of the American Medical Association, in 1916. Dr. Robert E. Loucks, President of the Society in 1922, was one of its pioneers and prime mover in the work of organization. This year the American Radium Society again met in Detroit, June 23 and 24, and Dr. Loucks, as Chairman of the Program Committee, arranged a splendid program on the uses of radium in malignant as well as some non-malignant conditions.—*Wayne County Medical Bulletin*.

The American College of Physicians announces the John Phillips' memorial prize of \$1,500 to be awarded for the most meritorious contribution in internal medicine and sciences contributing thereto. All papers must be mailed to the executive secretary, Dr. E. R. Loveland, Philadelphia, Pa., by August 31, 1930. Among the conditions are: the contribution must be in the form of a thesis based upon published or unpublished original work. It must be in English of which three copies must be submitted. The dissertation must be based upon work done either whole or in part in the United States or Canada. The successful paper will be read at the next annual meeting of the College of Physicians.

Dr. C. C. Slemons, who was appointed as temporary Commissioner of Health for the State of Michigan following the death of Dr. Guy L. Kiefer, has been made permanent Commissioner of Health. Dr. Slemons was educated at the Ferris Institute, Big Rapids, Michigan, and at the University of Illinois. He obtained his M.D. degree from the Detroit College of Medicine in 1905. He began practice in North Branch, Michigan, in 1905 but moved the following year to Grand Rapids, where he has practised to the present time. Dr. Slemons was city bacteriologist from 1907 to 1908 and was appointed Health Officer of Grand Rapids in 1908 on part-time service. He had been full-time Health Officer in 1918. He has also been a member of the State Council of Health since 1918.

Following the post-graduate courses given in Detroit, physicians will be able to continue with emphasis on the more academic phases of medicine at the summer school at Ann Arbor which begins on June 30 and continues to August 8. Courses cover work in anatomy, bacteriology, dermatology and syphilology, internal medicine, neurology, obstetrics and gynecology, ophthalmology, otolaryngology, pathology, pediatrics, pharmacology, materia medica and therapeutics, physiologic chemistry, physiology, roentgenology and surgery. Some of the laboratory work will extend to August 22. There is also announced special week-end public health institutes of interest to practitioners of medicine who for some reason or other cannot avail themselves of the regular term work. Information in regard to this phase of the work may be obtained from Dr. John Sundwall, Director of the Division of Hygiene and Public Health at the University.

The annual Inter-City medical meeting sponsored by the Bay County Medical Society, was held at Fisher's Hotel, Frankenmuth, Friday evening, May 9 at 7:00 o'clock.

Over three hundred physicians and surgeons of the state attended the meeting, coming from as far north as the Soo and as far south as Detroit. The splendid turnout was very gratifying to the committee who were untiring in their efforts to make the meeting a success.

Herman Fisher served one of his old fashioned chicken dinners and his dining room facilities were taxed to the limit to care for the crowd.

The meeting was opened by President Charles W. Ash of the Bay County Society. He introduced Dr. J. D. Brook, president of the Michigan State Medical Society, who presided at the meeting. Dr. Brook announced the death of Dr. Guy Kiefer, State Commissioner of Health. The whole assembly stood at silent attention out of respect to the departed.

The speaker of the evening, Dr. George W. Crile, Cleveland, Ohio, gave a most enlightening talk on the subject, "Thyroidectomy—Its Indications—Its Methods—Its Complications—Its End-results," illustrated with chalk diagrams. The transcript of the talk will appear at a later date, probably in the State Journal.

THE FIFTH ANNUAL MEETING MICHIGAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS

The May issue of the Journal made brief note of the annual meeting of the Michigan Association of Industrial Physicians and Surgeons that was held in Flint in the Hurley Hospital, Friday, April 25, merely giving the subjects and order of the program as it was presented.

As a result of the sentiment expressed at the meet-

ing of the Association at Jackson last September, the Board of Directors arranged to hold the annual meeting in April, with a program of clinics, business sessions, professional papers and discussions, and an evening dinner and address. The directors and committees are highly gratified with the results of the efforts to renew interest and activity in the society.

There were 138 registered at the meeting and over 150 attended the various sessions. The local arrangements were ideal, thanks to Dr. Carl Moll and his committee, and Dr. Clifford Brainard's committee provided a program that fully justified the great interest and enthusiasm shown. Stenographic minutes of the business sessions are contained in the secretary's records, of which a brief résumé is here given.

The business sessions were devoted principally to the reports of committees. Certain features of these reports were of special interest and significance. The membership committee, Dr. T. H. Heavenrich, Chairman, presented the names of 70 new applicants who were elected to active membership in the association.

The committee on Constitution and By-laws, Dr. J. G. R. Manwaring, Chairman, presented four amendments to the by-laws. A spirited discussion on the adoption of these amendments was engaged in by Doctors Christensen, Hafford, Stone, Poole, Knapp, Moll, Penberthy, Wood, Heavenrich, Pyle, Lecklider, Kiefer and Gorsline. As amended, the by-laws require: that, to be eligible to membership in the Michigan Association of Industrial Physicians and Surgeons one must be a member of the county medical society; that applications for membership must be endorsed by the secretary of the county medical society and one member of this association, and presented to the secretary of the association with the annual dues of \$3.00; that the fiscal year shall date from May first; that the annual meeting shall be held in the month of April, the exact date and place of meeting to be decided by the board of directors.

For the next annual meeting, invitations were presented from the Mayor, the Board of Commerce, and the Convention Bureau of Detroit. Dr. Penberthy stated that the members from Detroit would like very much to have the next meeting, but, if any other cities cared to extend an invitation the Detroit delegation would stand by and give them support. Members from other cities were instructed to present to the board of directors their bids for the next meeting, if they wished to entertain it.

All the association executive officers were re-elected, as also was Dr. Moll to succeed himself on the board. Following is the personnel of the board of directors: President, Dr. C. S. Gorsline; Vice President, Dr. C. W. Brainard; Secretary-Treasurer, Dr. F. A. Poole; Directors: for one year, Dr. R. H. Denham; for two years, Dr. G. C. Penberthy; for three years, Dr. Carl F. Moll.

Many suggestions were made, most of them touching upon the economic phases of industrial practice, and the board of directors have in mind the appointment of strong committees to investigate the many problems and bring in reports and recommendations at the next annual meeting. It was the prevailing opinion, as expressed, that one day for the annual meeting is too limited a time to cover a year's work and give adequate attention to both business and scientific problems. This matter will be given careful consideration in planning the next program.

C. S. GORSLINE,
President.

COMMUNICATIONS

SPHENOPALATINE PHENOMENA

Reply to Doctor McClintic

To the Editor:

In reply to the communication of Dr. C. F. McClintic in the June issue of the JOURNAL, it is regrettable if the doctor has inferred any unfriendliness in my expression which he quotes from the April issue: "Familiarity with the phenomena associated with the sphenopalatine test and due regard for their import would have saved McClintic from the error that 'eye pain is transmitted via the sphenopalatine ganglion.'" The necessity for exposing the fallacy to which the doctor committed himself was keenly regretted. A scientific treatment of the subject, however, demanded that this fallacy be exposed. It was endeavored to couch the correction in the simple and candid language of science, and it was even hoped that the doctor would welcome it in the spirit of a seeker after truth.

No embarrassment should attend the correction of an error disclosed in a field with which he could not be expected to be familiar; for it should be understood that familiarity with sphenopalatine phenomena cannot be acquired in a day; not only is it necessary to wait for instructive cases, but when such a case is found it may be necessary to subject it to repeated tests under varying conditions and in various combinations of nerve injection before the new information that it can yield to research of this kind has been exhausted. Moreover, familiarity with sphenopalatine phenomena as they are observable about the eye requires access to eye cases over a long period of time, such as is hardly possible except in an ophthalmological practice. I mention this to exonerate the doctor from discredit in not being familiar with these phenomena, with which one practicing a surgical specialty such as his can have only the most limited contact.

The limitations imposed by his specialty upon his facilities for observation are shown in his expression: "I never consider operation for trifacial neuralgia or other head pains until I am satisfied that head pains cannot be relieved by anesthetization of this ganglion" (the sphenopalatine). Familiarity with sphenopalatine phenomena would have made him know that the distribution of the trifacial nerve is the one great region of the body in which it is well nigh hopeless to attempt sphenopalatine treatment, the exceptions being in the peripheral zone in which the distribution of the trifacial nerve and that of the sphenopalatine ganglion overlap, and these, after all, are not really exceptions, but special cases with which trifacial neuralgia may be confused.

It would be illuminating to Dr. McClintic, to whose mind these phenomena have as yet presented no perplexing problems, if, in a case of pain in the cornea or conjunctiva, as keratitis or conjunctivitis, he would anesthetize the sphenopalatine ganglion of the same side, and after having satisfied himself that the pain has been relieved, then, taking a wisp of cotton, would test the eye for sensitiveness, to determine whether the relief was really obtained by blocking the path of pain.

The results of this test should indicate to him that the clinician is not without a function to perform in neuro-anatomical discussion; for although the clinician may not be qualified to give an interpretation for the facts he discloses, it is within his province to say that no interpretation shall stand that is in conflict with them. In science the observed fact is the supreme authority.

It is a happy coincidence that Dr. McClintic mentions with approval that outstanding neuro-anatomist, Dr. Stephen W. Ranson. On this very question of eye pain I recently wrote to Dr. Ranson. In his reply he said: "I wish I could answer your questions. Dr. Sluder and I often went over this ground together and discussed the various possible explanations of the relief of pain obtained by anesthetization of the sphenopalatine ganglion. The conclusion which I reached was that it cannot be reconciled with present day conceptions of the anatomy and physiology of the nervous system. Since so many clinicians have confirmed Sluder's findings, I am keeping an open mind but I cannot see the solution."

Perhaps the most surprising of Dr. McClintic's expressions is his dictum in a field with which his acquaintance is necessarily superficial: "Every clinical observation that Dr. Byrd has made can be explained upon a scientific basis without postulating or theorizing . . . and the results that he claims are not new. . . ." This impetuous dictum is in striking contrast with the calm open-mindedness with which a neuro-anatomist of Dr. Ranson's standing views the disclosure of facts at variance with present day conceptions of physiology.

Moreover, the scientific candor with which Dr. Ranson concedes that he sees no explanation for these phenomena should make one hesitate before averring that they are all explained and contain nothing new. Dr. Ranson's example should make it easy to admit, with Will Rogers, that we are all ignorant, but about different things.

HIRAM BYRD.

2201 E. Jefferson Avenue,
Detroit.

June 7, 1930.

A LOCATION FOR A YOUNG DOCTOR

Journal of the Michigan State Medical Society.

To the Editor:

The first of last April my husband, Dr. Long, died. I have his office equipment to dispose of and am very anxious to do this as soon as possible. Do you not know of some young doctor who is looking for a good opening? There is a splendid opening here just now. Our little city has four practicing physicians. Should you know of some one and will give me his name and address, I would be very glad to write him in regard to equipment, practice, and fees as they are here.

MRS. NELLIE LONG,
Eaton Rapids,
Michigan.

VIGANTOL NOT ACCEPTED

"Viosterol" is the name adopted by the Council on Pharmacy and Chemistry for irradiated ergosterol, and "viosterol in oil 100 D" for a solution in vegetable oil having one hundred times the antirachitic potency of a standard cod liver oil. All of the firms licensed by the University of Wisconsin Foundation to prepare this preparation have agreed to coöperate with the Council on Pharmacy and Chemistry, by using this name, except the Winthrop Chemical Company. The Winthrop Chemical Company has determined to call its product "Vigantol," notwithstanding the fact that the Council has declared that the application of such a proprietary name is contrary to the best interests of the medical profession and the public. The medical profession must support the Council in this type of work if the Council's efforts are to be effective. (Jour. A. M. A., February 8, 1930, p. 415.)

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS L. J. HARRIS, President, Jackson, Mich.
MRS. J. EARL McINTYRE, Secretary, Lansing, Mich.

COUNTY SOCIETIES

OAKLAND COUNTY

WOMAN'S AUXILIARY TO THE BAY COUNTY MEDICAL SOCIETY

The Auxiliary met May 9 for a pot-luck supper at the home of Mrs. E. A. Wittwer on N. Henry Street. Twenty members were present.

Mrs. P. R. Urmston, president, conducted the business meeting.

The election of delegates to the A. M. A. at Detroit in June resulted as:

1. Mrs. P. R. Urmston
2. Mrs. A. W. Herrick

Alternates:

1. Mrs. A. D. Allen
2. Mrs. M. R. Slattery

The delegate to the State Auxiliary Medical Meeting was also elected, Mrs. V. H. Dumond.

The subscription for the Hygeia magazines which were placed last year were ordered renewed.

The meeting adjourned for a social hour.

Mrs. M. R. Slattery showed movies, which were greatly enjoyed. We thank her very much and Mrs. Wittwer for her hospitality.

MRS. P. R. URMSTON.

WOMAN'S AUXILIARY TO THE INGHAM COUNTY MEDICAL SOCIETY

Mrs. Charles P. Doyle was chosen president of the auxiliary to the Ingham County Medical Society for the ensuing year at the luncheon and annual meeting of the organization held Monday afternoon in the Wisteria Room of the Hotel Olds, Lansing.

Other new officers are: Mrs. P. C. Strauss, vice-president, and Mrs. A. M. Campbell, secretary and treasurer. They will succeed the retiring officers, Mrs. L. C. Hart, President, Mrs. L. C. Towne, vice-president, and Mrs. William McNamara, secretary and treasurer.

Covers were laid for 40 at the luncheon tables, which were embellished with bowls of many hued spring flowers. Mrs. B. Harris, State President, of Jackson, was present at the meeting and gave a short talk. Mrs. George P. Todd of Detroit was an out-of-town guest. Following the luncheon and meeting bridge was played, with honors going to Mrs. P. C. Strauss and Mrs. Harry Wilson.

Mrs. Wilson was in charge of arrangements, assisted by Mrs. M. C. Loree. The entertainment committee was composed of Mrs. L. H. Darling, Mrs. Howard Wilson, and Mrs. Milton Shaw.

VITAMIN D IN TUBERCULOSIS

A recent investigation of the role of vitamin D in the management of tuberculosis indicated that the administration of viosterol did not produce any detectable acceleration of the healing process. These observations suggest that such value as cod liver oil possesses in tuberculosis does not depend on its relatively high concentration of vitamin D. These studies emphasize the fact that cod liver oil possesses more than one claim to nutritive value, for it is even richer in vitamin A than in the antirachitic factor. In spite of the enormous antirachitic potency of viosterol, this material is by no means to be regarded as therapeutically equivalent to cod liver oil. (Jour. A. M. A., February 8, 1930, p. 414.)

Dr. J. G. R. Manwaring, Flint physician, and Dr. C. J. Lyons, University of Michigan dental instructor, talked on "Focal Infections" at a joint meeting of the Oakland County Medical Society and the Oakland County Dental society at the Board of Commerce, Thursday evening, May 15, 1930.

A focal infection was defined as one in which the bacteria exist in a relatively small area of the body and from there are sent out into the blood, often producing disease and functional disorders in other parts which may be remote from the primary focus.

Dr. Manwaring discussed the subject with respect to infections about the body and Dr. Lyons stressed the point of infections about the teeth and mouth after describing the development of the dental profession over the past 100 years.

Dr. LeRoy F. Hill, president of the dentists, introduced Dr. Lyons and Dr. L. C. Sheffield, program chairman, introduced Dr. Manwaring. Dr. B. M. Mitchell is president of the county physicians' group. Both the dental and medical societies held brief business sessions prior to the joint program, the latter body electing Dr. E. L. Spoehr of Ferndale to membership.

The next meeting of the physicians will be at Royal Oak, June 19.

The Oakland County Medical Society held its annual golf tournament Wednesday at the Glen Oaks Golf club. Forty attended the dinner, which followed the afternoon of golf.

The Chapman trophy, a large silver cup donated by Dr. H. S. Chapman, was won by Dr. O. O. Beck of Birmingham, with a score of 91. Dr. A. L. Brannock was winner of the cup last year. Runners-up this year were Dr. E. V. Howlett, 94, and Dr. B. T. Larson, 96.

The Dr. Dubbs trophy was awarded to Dr. F. S. Bachelder.

Winners in the kickers handicap were Dr. F. A. Mercer, Dr. F. B. Gerls, Dr. L. W. Gatley and Dr. J. J. Murphy.

Dr. Chapman presented the trophy at the dinner.

BERRIEN COUNTY

One of the most enthusiastic and worth while meetings held in some time was the May meeting of the Berrien-Cass Medical Societies. The two societies held a quarterly meeting in Cass County, with the members of the Cass County Society acting as hosts.

Dinner was served at 6:30 to 45 guests at the Shore Acres Hotel at Diamond Lake located just a short distance from Cassopolis. Following this a short business meeting was held and then the members listened to an extremely interesting and practical talk by Dr. Alexander M. Campbell of Grand Rapids on "A Practical Consideration of Uterine Hemorrhage."

To all who have heard Dr. Campbell talk it is needless to say that for interesting and practical considerations of the subjects facing the general practitioner he is an artist. His subject, manner of

presentation and personality keeps his audience under constant attention as shown by the interesting and worth while discussion which followed his talk.

Dealing with the importance and relative frequency of severe hemorrhage, the etiology, pathology and treatment were discussed in an orderly and practical manner. Accompanied by slides and specimens to illustrate, as well as instruments to demonstrate the procedures, his talk was made more than usually interesting. Particularly the value and safety of early packing of the post-partum uterus in case of hemorrhage was clearly demonstrated. The necessity of careful examinations, and sound exploration of the uterus of senile type was spoken of to diagnose early malignancy. The complete review, summary and new methods of treatment made the paper one of the best that we have ever heard.

W. C. ELLET, *Secretary.*

IONIA-MONTCALM COUNTY

The May meeting of the Ionia-Montcalm Medical Society began with a splendid dinner ably served by Doctor Robertson's staff in the officers' dining room at the State Hospital, and ably disposed of by the twenty-seven attending members.

After the dinner the meeting was transferred to the Hospital Chapel, where a short business session preceded the scientific program.

Secretary read letter from the State Secretary calling a meeting of Chairmen of all County medico-legal committees at Ann Arbor, May 16. President Robertson appointed Doctors Johnson, Pinkham and McCann to constitute such a committee.

Secretary instructed to convey to the family of the late Doctor Kiefer, State Commissioner of Health, the condolence of the Society and its sense of loss in his death.

Secretary instructed to correspond with State Secretary regarding the possibility of receiving dentists as associate members of the county society.

The first paper of the program, that of Doctor Duvals, on "Early Symptoms of Mental Diseases and their Recognition by Physicians in General Practice," was read by Doctor Imus in the absence of Doctor Duval. It was very comprehensive, well prepared and well received by the audience. The Secretary was instructed to send a message to Doctor Duval, expressing the appreciation of the Society and its good wishes for his return.

Doctor Imus gave a summary of the experience of himself and others in treatment of syphilis of the central nervous system; his successes, fair results, and failures. This paper was illustrated by the presentation of patients so treated. Doctors were intensely interested, almost startled, by the results obtained in many serious parietic cases.

Doctor Robertson gave a very able and scholarly paper on the relative bearing on crime shown by the various groups of insane, in this and five of the other seven hospitals for the criminal insane throughout the country.

This paper was the report of a very intensive study of insanity and crime, with a correlation of diagnosis, and incidence as a cause of crime, in a total of 3,800 cases.

A request, that he allow us to offer his paper for publication in the state journal was granted with his accustomed modesty.

The meeting adjourned after voting its appreciation to Doctor Robertson and his co-laborers for providing a very successful meeting.

Following the adjournment, the Medico-legal Committee met and elected Dr. John J. McCann to attend the Ann Arbor meeting, on May 16.

JOHN J. MCCANN, *Secretary.*

THE EDITOR'S EASY CHAIR

THE BIOLOGIST AND THE PROBLEMS OF LIFE*

Those things which stimulate scientific men to study the world about them do not seem to be well understood even by the majority of educated people. In an age such as this when literally thousands of men and women are engaged in scientific investigation and when people generally appear to respect the investigator, such lack of understanding may appear rather strange. When, however, one considers that the scientist appeals in his writing to a group of professional readers and that scientific progress is heralded to the public, more often than not, by the appearance of impersonal mechanical inventions or fantastic press notices, a correct evaluation of the scientist is not to be expected. Since science has a dominating influence over our lives it is desirable to understand the scientific worker.

Like the artist or philosopher, the scientist is an individualist. He must renounce authority and form personal judgments about the facts of his study. It is this personal association with his subject, the playing with ideas, the silent argument of apparently conflicting data, the weaving of hypotheses to cover the ever-growing body of facts which is the dominant interest of the investigator. In the same way that a physician is interested in the recognition of a disease syndrome and interpreting its meaning and consequences, the investigator is devoted to the relation of fact to generalization. How little of this aspect of science is understood by the average person!

THE SCIENTIST AND THE PUBLIC

Pure science is not self-sustaining and from its very nature cannot be. In the past, scientific studies have been largely fostered by the patronage of an aristocratic class, now they are supported more or less directly by the public. As Charles II financed the experiments of the physiologist Harvey, so the public of today finances the work of a large number of investigators. Charles, however, was able from time to time to stand by Harvey's side, to observe the facts which Harvey observed, to be stimulated by his enthusiasm and, perhaps, to share it. Those who supply the funds for modern research may not be so privileged but many scientific men are awakening to the need of encouraging public interest. Many are providing general non-technical articles and books for the dissemination of their facts, their theories and their interests. One need but mention the success of Eddington, Jeans, Haldane, J. A. Thompson, Julian Huxley, Herrick and Tilney in presenting scientific concepts in a way to render them intelligible at least to the generally educated reader.

In the field of general biology the writings of scientific men are not only of interest but tend to make possible a more satisfactory way of living. The interest of such a subject and the cautious but stimulating enthusiasm of the scientist seldom have been brought together more successfully than in a recent work† by a number of scientific men. In this work we may read beyond the exposition of scientific data and see something of the personal thought-characteristics of the scientist. This is possible not only because the articles are written primarily for general reading but because of the very fact that a

*Written for this department at the request of the editor.
†See footnote on page 540.

number of men have contributed. The reader correlates the work of the different writers and is able to see thereby certain general characteristics which pervade all the articles. These characteristics (scientific imagination and the love of specific observation, analysis, correlation, and evaluation), which are in a way the distinguishing mark of the scientist, must be treated sympathetically, since they have had, indirectly perhaps, such great influence upon civilization.

LIFE IN SPACE

Perplexing questions arise in every field of human thought, and the biologist may be confronted with such as: "How widespread a phenomenon is life?" "When did life originate and how?" "How long has life lasted and how long will it continue?" The earth-bound biologist has searched mountains and the ocean depths, hot springs, deserts and the polar regions and has found evidence of living things everywhere on the earth's surface. The imagination suggests the possibility of life occurring elsewhere than on our earth. Although astronomical instruments may give much accurate data, our telescopes are too imperfect to observe the heavenly bodies directly for evidence of life. But may not the astronomer have indirect evidence? Professor Henry N. Russell, of Princeton, has examined astronomical knowledge to find whether any of the heavenly bodies may support life, that is, organisms whose chemistry and metabolism are of the same nature as those with which we are familiar. Certain conditions are essential for the support of life, namely, "an adequate temperature, sunlight, water, atmospheric oxygen, a land surface, days, seasons, an adequate force of gravity, and a sufficient atmospheric density."

Of the billion heavenly bodies known to astronomy most may be disregarded; the stars are too hot for living organisms and the nebulae and comets are gaseous. The hundreds of asteroids and the satellites of the larger planets are too small to hold an atmosphere. Of the nine planets of the solar system, the only other known bodies, Mars alone possesses an atmosphere, has a suitable temperature, oxygen, water and a daily rotation similar to that of the earth. Mars may support life, but does it? We do not know; there is some evidence, however, in favor of it. Photographs of the planet show green or gray markings which are "prominent in the spring of the hemisphere in which they lie, and tend to fade out in the autumn and winter [this fading is correlated with the spread of the polar ice caps], at which season the color sometimes changes from greenish to yellow or brown. These changes, though repeating themselves in successive seasons, show considerable irregularity." The "canals" too show seasonal changes in visibility which run parallel to those of the dark areas. May not these changing patches indicate seasonal changes of vegetation, and the canals, waterways banked by plant life? An observer on Mars with the equipment of the modern astronomer might see similar changes on the earth's surface. The high oxygen content of the atmosphere of Mars might seem to be associated with the photosynthetic action of plants rather than with any in-

organic process. With plants present, animal life could be maintained.

If such indications be given credence, life may not be a peculiarity of our planet but may be a phenomenon which arises fortuitously wherever and whenever conditions are favorable. If life should be found to exist on any other planet, it would be another shock, as the researches of Copernicus and Darwin were, to man's egocentricity; a blow of the type which has always had a wholesome effect on man, and which reveals the magnificent uniformity pervading nature.

LIFE IN TIME

The radioactive element uranium is slowly transformed (one per cent in sixty-six million years) to lead (which differs from ordinary lead by a slight difference of atomic weight). Uranium was laid in deposits at the time when the earth cooled and the earth crust was formed. When the relative amounts of uranium and lead from these deposits is determined the length of time since uranium was first laid down may be estimated; this is the time of formation of the earth's crust and it appears to have been less than five billion years. Life evidently arose since that time.

The source of earthly energy is the Sun, a body which is gradually becoming smaller through the loss of radiant energy. "To a single pound of mass corresponds heat enough to raise 20,000,000 tons of rock to a temperature of 2000° C. . . the sun's total radiation corresponds to a loss of 4,600,000 tons a second." Even so "the sun would last for 15,000,000,000,000 years." The sun may thus supply light and heat to maintain life on earth for tens or hundreds of billions of years as it has done for the past billion or more years.

THE ORIGIN OF LIFE

As to the origin of life there is further mystery. The synthesis of organic compounds in the laboratory and the fact that spectroscopic examinations of stars have shown hydrocarbons to be present and to be more complex on cooler stars than on the larger hotter bodies, suggest that organic compounds might appear spontaneously. With the cooling of a stellar sphere condensation of water occurs and with it ionization phenomena. Catalysts are formed, and the organic compounds increase in complexity; perhaps amino acids, peptides, and simple proteins are synthesized. "The primal organism," says Macallum, "was ultra-microscopic in size, was of comparatively simple constitution, and began as the product of the union in a special complex of a number of amino acids which were formed from constituents of the atmosphere when the condensations of water vapor, at or below 100° C., were continuous, and when also evaporation of small isolated bodies of water concentrated the amino acids in them and rendered the synthesis of them into complexes, millions in number, one of which had 'the promise and potency of all terrestrial life.'" Only in this way may we account for the origin of life.

LIFE, INTEGRATED AND CORRELATED

The early, possibly ultra-microscopic life germ differentiated, gained characters, lost others and eventually became a cell. The possibility of reproduction developed. Macallum believes that the cell nucleus may have developed by concentration of the reproductive elements as a reaction to the increased saltiness of the sea-water environment over eons of time. Mitosis occurred at least before the separation of animal and plant forms. Then followed the progressive differentiation of animals and plants, the

†Human Biology and Racial Welfare, edited by Edmund V. Cowdry with the cooperation of Walter B. Cannon, Alexis Carrel, Edmund V. Cowdry, Edwin Grant Conklin, Charles B. Davenport, John Dewey, Haven Emerson, John F. Fulton, William King Gregory, William Healy, Ales Hrdlicka, Ellsworth Huntington, Paul A. Lewis, Archibald B. Macallum, Elmer V. McCollum, Robert A. Millikan, George H. Parker, Harry A. Overstreet, Raymond Pearl, Earle B. Phelps, Sir Humphry Rolleston, Henry Norris Russell, Sir Chas. S. Sherrington, William M. Wheeler, Clark Wissler, Robert M. Yerkes, Hans Zinsser, with an introduction by Edwin R. Embree. 612 pp. Paul B. Hoeber, Inc., New York. 1930. \$6.00.

adaptation to new environments and the formation of new life patterns. In short, the whole series of changes which we know as evolution began. One organ or another, quick muscles, a strong armor, or an efficient brain became the dominant feature—the feature of survival value. All these changes with which we are familiar through the studies of biologists of the last seventy years resulted in countless animals and plants, as well as in man.

Although there have been innumerable changes in body form or function, the individual cell has always had certain problems to meet and has met them in similar ways, changing its characteristics or habits only when the organism as a whole seemed to profit.

The cells of more complex animals have under favorable circumstances the property of forming or controlling their own environment. Back in early geological times when multicellular animals first appeared, a certain amount of their sea-water environment was walled off to form an intercellular fluid matrix. The sea water had salts in concentration different from what it contains at present, and in it cells acted efficiently. Although the organism as a whole may have had a variable environment, this intercellular fluid became the real environment of the cells. When animals began to take to land they brought with them the old internal environment which had served them so efficiently. Sea water has since changed its concentration of salts (particularly the proportion of sodium and potassium) by the solution of land substances but the animal has retained its old internal environment which, as Macallum has shown, is similar in vastly different animals. The problems of metabolism which have been solved, or are being studied by physiologists, are directed to the relationship between the cells and the internal environment. The problem of cells as functional units is the protection and maintenance of an environment in which the body-cells-as-organism can maintain itself.

Although the organism has problems within its own body which it must solve in order to exist, it also has problems associated with its more variable outer environment. Of these, the practical problems of existence, the biologist has also something to say.

THE BIOLOGIST AND HUMAN PROBLEMS

Human biology may be considered in two categories, first that which concerns the harmonious relation of man to his external environment and second the problem of man and the future. In a wide sense the first of these is the problem of health. It is the healthy man or community which is best adapted to meet the vicissitudes of life. When a man is living efficiently and orderly he is getting real satisfaction out of life. The immediate and practical problem of human biology is to discover those conditions which are desirable and to find means for making them available to a greater number of people.

Since early times the human race has spread to nearly every part of the world; it has had to meet different environmental circumstances. Some of these have been for the betterment of the race and some otherwise. The biologist has been studying man under these assumed conditions to find the essential or optimum factors of environment. He is checking his findings by laboratory studies so that undesirable conditions may be eliminated and desirable factors encouraged.

Shelter and food are man's immediate needs. The world provides very different climatic conditions, and though man has been able to survive them, he has flourished under some conditions and in others he has merely existed. Statistical studies have revealed correlation between the energy or adaptability of man and these various conditions. Studies

on mental and physical efficiency under various enforced laboratory conditions have provided data which indicate the best physical environment for him. Biochemists and dieticians have analyzed foods and have discovered their useful elements, the essential amino acids and the food principles.

Man as a social animal has congregated in cities, has adopted an unsettled and hurried life, sunless avenues of masonry and mechanical devices which have impinged upon his natural physical vigor. He has rendered himself more susceptible to infectious diseases and has collected about him anti-social or atavistic individuals who have made his life dangerous or expensive.

Sociologists are studying these conditions. New ways of treatment of the criminal have developed; health officers and physicians are working to reduce disease to a minimum; educational facilities are being developed for the adaptation of children and adults as well to a changing environment. Medical science has eliminated certain diseases, has developed cures for others, is learning the nature of still more and has developed ways of immunizing people against infections. Man is providing countless ways of protecting himself against the unfavorable circumstances of his environment. But is he concerned with the conditions of tomorrow as well as those of today?

THE FUTURE OF MAN

The question arises, "How long can we continue to live as we do now?" A stable food supply and a rapidly increasing population demand the answer, "not long." Life has become increasingly complex. Men are finding the pace too fast and are becoming broken in health or are dying at an early age. The world's greatest need now is, and in the future will be, better men.

Biologists during the past thirty years have discovered some of the principles of heredity, the laws of inheritance have been studied in man as well as in the lower animals and the effect of genetic factors upon development is being learned. It has been found that by judicious breeding certain desirable characters may be brought out in a race and others repressed. The logical inference is that of his own free will man should be able to better the condition of his progeny. This means that through selective breeding and through a thorough understanding of sex and marriage a high class of offspring may be produced and nourished under optimum environmental conditions. Likewise the biologically unfit will be discouraged from procreation. The separation of man into races is an evolutionary process and it is along the lines indicated by race differences that evolutionary progress of man will result. Although the most rigid eugenic measures may or may not encourage advance, they will allow man to realize his full possibilities as a human being.

The matter of eugenics has been found to work very successfully in the production of a superior quality of animals where it has been possible to carry out artificial selection to the fullest extent. When it comes to be applied to human beings we are confronted at once with the problem of free will, the rights and privileges of man. Artificial selection is possible only to a limited extent at present when applied to human beings and that largely for the purpose of elimination of what might turn out to be mentally deficient. In other words we have segregation of the feeble-minded and such sterilization as is legally permissible to prevent the procreation of this class. There is no question as to the desirability of healthy children and as many of them as may be given suitable opportunity to grow to be useful and intelligent citizens.

—W. T. DEMPSTER

THE DOCTOR'S LIBRARY

THE MEDICAL HISTORY OF MICHIGAN

Reviewed by J. B. JACKSON, M.D.

KALAMAZOO, MICHIGAN

The first volume of our Medical History of Michigan is now in print and is a source of satisfaction and pride to all who have had any part in its preparation. Members of the Michigan State Medical Society may feel that this volume is a fitting memorial to the medical pioneers of Michigan who have literally "blazed the trail" for modern medical practice. This work is an answer to Dr. Comstock's question of nearly fifty years ago, "What has the State Medical Society done toward perpetuating the life and services of her deceased and honored members?"

On reading this book one is immediately impressed with the great amount of material and the many sources of information involved in its preparation. The history of the medical profession in Michigan is inseparable from that of the general history of the state. The preparation of this volume necessitated an intimate knowledge of the development of our state from its very earliest days. In addition to this, the great mass of biographical data has necessitated the reviewing of material from many different sources.

The first chapter deals with "The Doctor Mainly from the Layman's Viewpoint." The author begins the book with a sentence which with its quaint humor is an index to the pages that follow. "It is helpful and disciplinary though not invariably contributory to self esteem for the physician to contemplate his significance from other than the professional angle." There follow laymen's estimates of the profession, some amusing, some "disciplinary," and some cheering. The author's final conclusion is that "By and large in the composite estimate, so to speak, the guild has not fared badly," but he adds "Blessed are the Meek."

The chapter on "The American Indian" contains much of interest and of historical value. It includes references to widely distributed tribes, for "Indians were in earlier times even more nomadic than automobile tourists of today." The Indian's mentality, manners, morals and medicine are discussed. Not the least interesting of the many inter-

esting matters written of in this chapter is a portion devoted to "The Emotional Sphere." "The women, like the men, paint their faces with red ochre, they omit nothing to make themselves lovely. The antecedents of the flapper and their just precedence chronologically should not be ignored by the twentieth century copy cat."

There follows a chapter on "Physicians with the Early Explorers and Adventurers" and one on "Eighteenth Century Michigan Physicians." These chapters are an adequate history of the earliest medical practice in the state and give one an appreciation of the great difficulties under which the medical man carried on his labors in those days. "It is altogether probable that one Jean Michel was of the pale-face race, the medical man having had the enviable opportunity to see Michigan first." Henry Belisle "seems to have been Detroit's first physician and surgeon."

Chapter V contains much of pioneer history and discusses the large part that the medical profession had in its making. "A Pioneer History of the Township of Grand Blanc" by Alvah Brainerd is especially of interest.

The work of William Beaumont is dealt with in the following chapter. It is especially fitting that "Michigan's Significant Contribution to the World's Medical History" should have a prominent place in such a book. Illustrations of the house in which Alexis St. Martin was wounded and of the Beaumont Monument on Mackinac Island add much to this very sincere appreciation of Beaumont's work so well expressed by the authors.

There follow two chapters which probably appeal most to medical men of today. These chapters contain biographical sketches and anecdotes of the medical men of the last century. One can be sure that this is quite what Dr. Comstock had in mind when in 1881 he wrote, "A thoroughly educated and virtuous doctor is the highest type of man. . . . He has an undoubted right to live in history for his own sake and the sake of the good cause with which his life has been crowned." Here is found such a wealth of biographical details that one marvels at the time and labor which must have been necessary to collect them. Practically every part of the state is represented in these sketches.

The chapter on Medical Education in Michigan written by Dr. Dempster is of

especial interest to those who have had their medical education in Michigan schools. It is a particularly happy handling of a subject which has been the source of some controversy in the past. This chapter is a distinct contribution to medical history.

The chapter on "A Master Surgeon," an appreciation of Dr. Theodore A. McGraw by Dr. Frederick A. Collier, is deserving of special mention. "So long as our profession can produce master surgeons such as Theodore A. McGraw as examples for newer generations of surgeons, our only errors will be when we deviate from the path they have blazed."

"Some Medical Men and Methods of Yester-year—Contacts and Close-ups" is a chapter devoted to biographical sketches of some of the professional leaders with whom the author was very closely associated; Hurd. Christian, Longyear, Manton, Warren. Inglis, Vaughan. These are all men whose memory we honor and of whose service to mankind we are justly proud. These "close-ups" are fascinating history and are of inestimable value.

Chapter XII deals with the History of Medical Journalism in Michigan and is written by Dr. Walter H. Sawyer. The earliest publication on Medicine in Michigan was the "Michigan Journal of Homeopathy" published at Detroit November 11, 1848. The regular profession felt the need of a medium of expression and in 1853 espoused the cause and interests of a medical publication which came into being under the name of "The Peninsular Journal of Medicine and The Collateral Sciences." The Journal of the Michigan State Medical Society was first issued in September, 1902. It has had five editors, A. P. Biddle, B. R. Schenk, Wilfred Haughey, F. C. Warnshuis, and J. H. Dempster.

The chapters on "Diagnostic Aids and Therapy" and on "Prevailing Diseases and Epidemics" contain many things that impress present day physicians with the changing status of medical practice.

The last chapter, on Public Health Work in Michigan, was written by Dr. Guy L. Kiefer, whose recent death is so great a loss to our professional ranks. This section contains many interesting facts and statistics which are thus available to history in a brief but authoritative form.

To Dr. C. B. Burr, of Flint, who has had the major part in the preparation of this

volume, the profession of our state owes a great debt of gratitude. He has given unsparingly of his time and ability to produce this history of medicine in Michigan which has long been in our minds but is now a reality. The great fund of historical matter, the many anecdotes, the quaint humor, the excellent literary style, the close-ups of many past leaders make this a rare volume.

The book is well printed and bound, the illustrations are good. We are all very happy that the fruition of our efforts to produce a history of Michigan Medicine has been so fortunate. We shall await with eagerness the publication of the second volume.

THE BIOLOGICAL BASIS OF HUMAN NATURE—Dr. H. S. Jennings, New York. W. W. Norton and Company. 384 pages. Price \$4.00.

This work renders a comparatively difficult subject intelligible to the educated layman. Outlines and popularization of scientific works are so often disappointing that one hesitates to recommend them. However, when the work of rendering a technical subject comparatively easy of comprehension is done by a master the result is often beyond criticism. Such is true of this book. What might be called the facts of biology, namely gens, chromosomes, their structure and function in the mechanics of heredity, are dealt with in a masterly way so that the perusal of the work will revive in the mind of the medical reader the knowledge of his early student days. Dr. Jennings' discussions of heredity and environment, and particularly the old controversy heredity vs. environment, as well as his discussion of the subject whether acquired characteristics or inherited, makes very interesting reading. Dr. Jennings also discusses in a clear and illuminating way the problem of eugenics.

THE COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION FOR 1929, Volume XXI. Edited by Mrs. M. H. Mellish, Richard M. Hewitt, M.D., and Mildred A. Felker, B.S. Octavo volume of 1,197 pages, with 279 illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, \$13.00 net.

There is so much in the twenty-first volume that it is very difficult to review it adequately. The Mayo Clinic and Mayo Foundation, as is well known, have not limited their researches to the clinical aspects of medical science, but have investigated the various fields of pure science. The present volume, however, is a selection that will prove of great service and interest to the general practitioner, the internist and the surgeon. The contents are divided into sections, fifty-three papers being devoted to the alimentary tract; twenty-three to the genito-urinary organs; fourteen to the ductless glands; twenty to the blood and circulatory organs. There are liberal sections dealing with the skin and syphilis, the head, trunk and extremities, the chest, brain, spinal cord and nerves; one section is devoted to technic. In addition there is a section comprising twenty-one papers on miscellaneous subjects. The volume is well illustrated wherever illustrations are found to add to the clearness of the text. There are so many subjects treated that we cannot imagine any physician who will not find a great deal of interesting and valuable information in this book.

OF GENERAL MEDICAL AND SURGICAL INTEREST

VIRUS DISEASES ATTACK NERVOUS SYSTEM*

Germes so small they cannot be seen by powerful microscopes frequently select the brain and spinal cord of the body as their point of attack, Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research, told the Washington meeting of National Academy of Sciences.

Infantile paralysis, and rabies, or hydrophobia, were cited by Dr. Flexner as excellent examples of these diseases in which the central nervous system is involved. The organisms are called viruses.

"The viruses themselves may be divided into two classes," Dr. Flexner said. "Those which tend to attack the central nervous system predominantly, and those which attack other organs with greater intensity and frequency than the central nervous system." Among the virus diseases which affect the central nervous system, Dr. Flexner mentioned smallpox, typhus fever, yellow fever, and measles in man; Borna's disease of horses; distemper in dogs and other animals; and psittacosis, which affects both birds and man. "We are just beginning to learn the frequency with which the central nervous system is involved in the virus diseases of man and of animals," he said.

CONGRESS MAY MAKE SURVEY OF HOSPITALS*

A complete survey of all hospital facilities in the United States may soon be undertaken by Congress. The purpose would be to discover available space which might be pressed into emergency service for sick veterans of the World War, who cannot be accommodated in Veterans' Bureau hospitals.

NATIONAL HEALTH INSURANCE INCREASING IN EUROPE*

The development of national health insurance is increasing along three lines, Dr. George F. McCleary, medical officer of the British Ministry of Health, said at the last of this season's De Lamar lectures at the Johns Hopkins School of Hygiene and Public Health, Baltimore. "The schemes in operation in the various countries differ considerably in regard to the proportion of the population coming within the scope of the scheme, the nature and extent of the benefits given and the relative costs falling on the insured persons, the employers and the State, but three broad lines of tendency may be observed," Dr. McCleary said. "The number of occupations made insurable tends to increase; the benefits in kind are relatively more fully developed and extended than benefits in cash; and an increasing effort is expended in preventive work." Health insurance on a national basis has had most important influences on the work of the medical profession in the various countries. Serious difficulties have been encountered, which, however, are believed to be in process of adjustment. Dr. McCleary outlined the development of mutual insurance against sickness, describing its place among the activities of the Guilds of the Middle Ages and the Friendly Societies in the 18th and 19th centuries. In 1884 sickness insurance on a compulsory basis was introduced into Germany by Bismarck and has since been adopted by most European countries, he said.

*Supplied by Science Service.

CULTIVATED TUBERCULOSIS GERMS CHANGE VARIETIES*

Evolution while you wait has been observed in cultures of tuberculosis bacilli by Dr. S. A. Petroff, bacteriologist of the Trudeau Sanatorium, N. Y., who reported his findings before a recent meeting of the National Academy of Sciences. From cultures of avian (bird) tuberculosis, Dr. Petroff has isolated what seem to be three distinct varieties of the germ. They grow differently, react differently to chemical and physical treatment, and have different physiological effects. One of the three types is quite virulent in its effects on chickens, the other two less so.

Similarly, from the tuberculosis of cattle a series of three cultured varieties was obtained. Their general appearance in mass was the same as that of the corresponding three types from the avian bacilli. They resembled them also in that one variety was strongly pathogenic, this time toward guinea pigs and rabbits, while the other two were less so.

Human tuberculosis germs proved less susceptible to separation into distinct strains or varieties. Dr. Petroff had best success with the long-cultured and somewhat vitiated "BCG" bacilli, which are used in the preparation of a vaccine widely used on infants in France. These bacilli separated out into two varieties, one of which had considerable effect on guinea pigs but little on rabbits, while the second variety appeared to be harmless to both animals. Cultures derived directly from human tuberculosis could not be separated into stable varieties. Dr. Petroff is of the opinion that human T. B. germs do produce many varieties, but that these do not "stay put" under laboratory conditions.

Dr. Petroff found it possible to convert one type of his bacilli into another by suitable culture methods, changing a virulent form into a mild one and vice versa.

This variability of the bacilli of different types of tuberculosis, and the instability of a variety that workers may succeed in isolating, agrees with fluctuating changes that have been found in other bacteria. The physiological changes that take place in the germs may supply a basis for the understanding of the wide variability in tuberculosis as found in human patients, which has always been a puzzle to doctors.

DOCTORS ASK FEDERAL RESEARCH ON DISEASES THAT SHORTEN LIFE*

Arteriosclerosis took former Chief Justice Taft from his country at the age of 73. Until a few weeks before his death his brain functioned unimpaired, "yet that disease, insidiously digging, perhaps for 50 years, had been taking his life, and is today slowly taking the lives of the most productive minds of this country." People are dying too young of cancer, pneumonia and arteriosclerosis. So declared Dr. Joseph Colt Bloodgood at a hearing before the House Interstate Commerce Committee on the Ransdell bill which would turn the Hygienic Laboratory of the U. S. Public Health Service into a big national health institute, where an enormous amount of medical research would go on, where fellowships would be given to M.D.'s and Ph.D.'s so that they may, with a clear economic conscience, devote years of their life to solving medical and health problems.

The bill has been before Congress for four years. It has passed the Senate this session, and action in the House is expected, for, as a result of the committee hearing, the House Interstate Commerce Committee will report it out favorably within a few days.

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ANGINA PECTORIS, INCLUDING CORONARY THROMBOSIS*

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DETROIT, MICHIGAN

Angina pectoris is a disease which is characterized by one or more of the following symptoms: (1) Stenocardia or a sense of constriction in the chest; (2) Pain of a deep-seated nature usually arising in the upper substernal region—pain which, in the earlier history of the individuals suffering from the disease, is brought on by exertion, ordinarily ceasing with the cessation of exercise. The pain radiates, commonly, up to the left shoulder and down the left arm; occasionally it is right-sided pain only and, in certain cases, radiates up into the neck; rarely the pain is epigastric in location. (3) Frequently there is also associated with these symptoms a fear of death but this is the least important of the three symptoms. The reflex nature of the phenomena of muscular contraction and pain radiation deserves special emphasis.

As to pathology, Sir Clifford Allbutt, in his treatise on the subject, advances, as his explanation, changes in the first portion of

the aorta and associates the symptoms with the tension of this artery. In our series of 93 cases, studied at this time, aortic enlargement was present in 31 cases; however, most of these cases had definite signs also in the heart itself. The present trend of opinion among cardiologists is to attribute coronary artery disease as the only cause of angina pectoris, those showing aortic disturbance being explicable on the associated changes taking place in the opening and first portion of the coronary artery. The usual explanation of the symptoms, to which we subscribe,

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is that they arise from changes in the caliber of, or obstruction to, the coronary artery, causing diminution of the heart's blood-supply, in this way making it impossible for the heart to supply the circulatory needs, and the angina in this case is simply a signal for the organism to exert as little effort as possible. The condition of intermittent claudication, appearing as the result of endarteritis, is an analogous condition.

Coronary thrombosis, which may be considered the most severe expression of angina pectoris, has the same pain distribution as the less serious condition. more commonly met, the chief characteristic of the pain being its continuity, it being a matter of hours or days, and may be entirely unassociated with physical exertion.

As far as etiology is concerned, infection seems to play an important role. To syphilis has been attributed too much significance in this connection, if we can judge from our own experience, as there are only 5 positive Wassermanns out of 44 that were run. Levine, in discussing the matter in an article in the Journal of The American Medical Association, September 26, 1922, reports positive reaction in 6 out of 81 cases or about 7%. The stigmata of syphilis in general are not so common in this class of patients. The striking fact that often presents itself is the evidence of physical development and the history of superiority in some branch of athletics in earlier life. The fact of ordinary streptococcus or influenzal infection being an etiological factor is incontrovertible. In this group of cases, in the acute forms and in early life, this is especially true, although occasionally syphilis is the exciting cause. A familial tendency may also be in evidence. In the case of patient No. 1461, there is a history of the death of her mother, one brother and one sister of angina pectoris, while a living brother has angina. Arterial degeneration, with a selective action on the aorta and coronaries, is a big factor in later life. For the purpose of comparison, the etiological factors in 25 unselected cases of heart disease were noted and the types of etiology were found to be the same as those in our table for angina pectoris; that is to say, the predominating factors were rheumatism, tonsillitis, infected teeth and influenza. In the cases below 20 years of age reported in the literature, aortic insufficiency of rheumatic fever causation was always present.

Of 93 cases reported, there was one under 20 years of age; between 20 and 30 years, there were four males and two females; between 30 and 40, there were 9 males; between 40 and 50, 12 males and 7 females; 27 males and 4 females between 50 and 60; 17 males and 6 females between 60 and 70; 3 males between 70 and 80, and one male over 80.

Symptomatology: The three cardinal symptoms, stenocardia, angina pectoris and dolor animi, are not always present, the one of chief importance being stenocardia. The description given by patients is of a vise-like feeling in the upper chest. This is often associated with a sensation of choking. The most fatal form of this disease need not be associated with anything more severe in the way of symptoms than a mild stenocardia. A significant onset of the disease is that it follows some form of unusual exercise without a period of preparation, such as playing ball at a family picnic, the patient not having played for months before. While a true case of angina pectoris may be associated with decompensation, it is not a common occurrence and there is no particular connection between the two, although decompensation may appear late in the history. In Case No. 1003, who had been under observation since October, 1920, when first seen, there were no signs of decompensation. In February, 1921, however, marked symptoms appeared and when before no persistent valvular murmur could be detected, there was a definite systolic murmur audible all over the heart area. A moderate condition of edema was present, going up to the knees. This patient also presents what has been called angina de toilette. The day before the last consultation in the office, he did not dare use the tooth-brush, for fear of bringing on an attack. This patient has, besides, nocturnal attacks. In early life he was champion oarsman and is of fine physical build. In another case, No. 529, when seen five years before, there were absolutely no signs of decompensation. When called again in consultation, November 17, 1922, there was marked congestive heart failure, with a right hydro-thorax.

As far as the heart itself is concerned, the following lesions were noted: Aortic enlargement in 31 cases, aortic stenosis 1, aortic insufficiency 2, mitral insufficiency 5, aortic and mitral insufficiency 4. The re-

mainder of the cases may be attributed to arteriosclerotic conditions only.

The pulse-rate does not seem to be increased by angina pectoris, considered as such. The average pulse-rate in this series was 82. When seen in severe attacks, it is surprising how little apparent cardiac disturbance may be noted, as shown by changes in the heart-sounds or increase in pulse-rate. The same fact may be noted concerning blood-pressure. In a few cases, it was high but evidently associated with arterial change in general. The average systolic blood-pressure on the whole group was 143, diastolic 77. The highest age was 80, the lowest 16, longest duration 23 years and shortest 2 hours. The number of known deaths was 31, of which there were 10 sudden deaths.

	20—30 S.—D.	30—40 S.—D.
Average, whole group.....	122—83	131—79
Male	120—86	131—79
Female	125—77	

In the total number of cases in the group, there were 74 males and 19 females. The blood-pressure in age-groups is as follows:

We have not made any division of true and pseudo-angina because we believe we either have or do not have the disease and that the term angina should not be applied, except when the diagnosis is certain. In neurotic individuals, a diagnosis of this kind should not be made without definite pathology. A differential diagnosis is not difficult usually in these cases on account of the association of nervous phenomena.

Irregularity of the heart was not common in this series, only 9 cases of premature systoles and 2 cases of auricular fibrillation being noted. Seven cases of premature ventricular systoles appear in the series; in one, premature auricular systoles, and in one, sometimes ventricular and sometimes auricular. There was one case of sinoauricular block, true block in one coronary thrombosis, ventricular tachycardia in another case of thrombosis, being followed by right bundle branch block, on the cessation of the tachycardia. This case was one sine dolore, the only one in the series complaining of neither stenocardia nor pain.

The character of the pain varies from that of extreme mildness to that of excruciating distress. Primarily the pain is found in the upper substernal region, never radiating around the chest but very deep-seated, shooting directly to the left shoulder and down the left arm. In this series of cases, those

presenting substernal pain alone numbered 21 cases; substernal and down the left arm only, 43; substernal and down the right arm alone, 2; substernal and down both arms, 26; substernal and radiating to the neck, 7; epigastric, 6; nocturnal attacks, 8. In one of the epigastric cases, although the history clearly showed that the attack of pain came on after unusual exercise only, a consultation of surgeons was held and the patient barely escaped being operated upon for gall-bladder disease. The radiating pain may not be very severe, rather a sensation of numbness and anesthesia, and again, tingling and burning may be perceived in its stead.

Electrocardiograms were run in 57 cases of this series. The chief abnormality is a negative T-wave which was present in 32

40—50 S.—D.	50—60 S.—D.	60—70 S.—D.	70—80 S.—D.	80—90 S.—D.
144—90	149—87	149—86	167—100	112—62
135—88	149—87	146—82	167—100	112—62
157—96	150—71	158—95		

cases; in Lead I alone in 8 cases; in II only in 3 cases; in III alone in 12 cases; in Leads I and II in 4 cases; in Leads II and III in one case; in Leads I and III in 4 cases; in Lead I in 1 case, and all Leads in 1 case. There was a cove-shaped T-wave in 12 cases.

The urinary findings in this group were unimportant. In the blood-nitrogen tests made, no marked changes were found.

The prognosis is not invariably fatal, the patient often dying of intercurrent conditions, such as pneumonia or as a result of arteriosclerosis in some other part of the body. The ability of the patient, financially and temperamentally, to live on a plane in accordance with the diseased condition, is the largest factor in lengthening the life of the individual. The prognosis in coronary thrombosis is extremely bad. Of 12 cases reported, only 5 are known to be living.

The pain of coronary thrombosis may last for hours or days and, also unlike the ordinary attack, is not provoked by physical exertion or emotional excitement. With coronary thrombosis, we have also various types of arrhythmia, such as heart-block, which is usually partial and occurs in the early stages. Very frequently auricular fibrillation is present, which may be preceded by premature systoles, paroxysmal tachycardia or auricular flutter. In one recent case which was unusual in that the patient complained of no pain, ventricular tachycardia was the cause of the presenting symp-

toms. When last seen, right bundle-branch block was present. On account of the cardiac infarction which takes place in coronary thrombosis, various unusual proteins are absorbed, causing elevation of temperature, which is usually moderate, this being accompanied by leukocytosis, which varies from 12,000 to 30,000. In the electrocardiograms, there are marked changes in the S-T interval, as well as the changes due to arrhythmia. In very early cases there is an R-T connection without the intervention of any S complex, the wave arising high on the downward limb of the R-wave. The more usual condition a little later is the peculiar S-T wave, cove in shape with the convexity upward, the origin at the S-wave being commonly below the isoelectric position of the string.

Dr. Parkinson's description of the electrocardiographic findings are as follows: "Usually a definite sequence of changes in the R-T segment and in the T waves is recorded. Shortly after the onset of symptoms a transient deviation of the R-T segment from the isoelectric plane occurs. This is followed by a deep inversion of the T-wave in either Lead I or Lead III but not in both, and often by a lesser degree of T inversion in Lead II. Curves obtained after a few weeks conform to one of the two main types, according to the incidence of T inversion in Lead I or in Lead III. Subsequent T-wave changes in the direction of the normal are recorded and even complete return to normal occurs. A negative T-wave in Lead III alone may be significant of past infarction."

Pain in coronary thrombosis more commonly radiates to the epigastrium than in the ordinary case of angina pectoris and the necessity of differentiating between coronary thrombosis and upper abdominal disease by the operating surgeon should not be overlooked. This can readily be done by means of the electrocardiographic examination and careful study of the history. A striking sudden fall of blood-pressure, frequently there being a 100 mm. drop in the systolic pressure, is significant. With cardiac infarction and consequent change in the epicardium, a pericardial friction rub may often be heard and should always be diligently looked for.

Treatment: The chief requisite in the line of treatment is the modification of the patient's life to a plane below that which brings on an attack. In the treatment of

acute attacks, the use of nitroglycerine 1/100 grains simply allowed to dissolve in the mouth, from which absorption takes place in three or four minutes, in most cases is sufficient to stop attacks. In some cases, perles of amylnitrite minims 5 by inhalation, are more effectual. If the blood pressure needs modification, during the period between attacks, we have found that sodium nitrite grains 1 or 2, four times a day, is usually effective. As a coronary dilator we have had the best results with theobromine in doses of grains 5, three times a day, increased if necessary. The use of euphyllin grains 1½ three times day is also beneficial along this line in certain cases. The use of some form of iodine, usually sodium iodide, in moderate doses, such as grains 5 three times a day, over a long period, is to be recommended, although it is a little difficult to gauge results on account of the slowness of its action. Where it interferes with the general well-being, causing loss of appetite, we have usually omitted its use for short periods. In acute attacks, where nitroglycerine is ineffective, the opiates have to be resorted to, either in the form of morphine sulphate, or, if the necessity of using over a long period is present, we have preferred codein alkaloid in ½ grain doses four times a day. Hyocyamus in the form of the extract, ¼ grain three times a day, is a useful adjunct. Considerable benefit in warding off attacks has resulted from the resort to the electric pad, which gives a more even heat than the hot water bottle. In a very few cases, general anesthesia had to be resorted to, in order to quiet the pain. The treatment of coronary thrombosis is along the same general lines as angina pectoris, absolute rest for a long period of time after the attack being imperative. We have had no experience with operative treatment of angina pectoris, but can see that it might be indicated in certain cases of unusually efficient myocardium, where the sensation of pain may not be necessary as a warning or where the pain may be excessive in relation to the amount of pathological condition. In general, we believe the pain is a factor of safety which should not be removed and, thus far, we have found no cases where we have considered it justifiable and where the patient was willing to consent to operation. In general, where the condition warrants operation, the patient cannot see its necessity, on account of his general well-being.

The following illustrative cases are unusually interesting:

G. Z.—Age 16; white, male.

Chief complaint—Pain over the heart and down left arm; shortness of breath.

The patient states that up to nine years ago he was healthy. He first noticed about that time a shortness of breath. He was in Children's Hospital over a year when he was taken out by his father. Later his legs and his feet began to swell and he went to Roosevelt Hospital for about five

Lungs showed no fluid, no râles and no consolidation.

Heart examination revealed systolic murmur at the apex, transmitted to the axilla, and diastolic murmur heard in the aortic area; pistol-shot sound in the brachial, capillary pulse. There was marked pulsation of all the visible arteries. Systolic and diastolic murmur heard over mitral region; accentuated second pulmonic. Left border about one and one-half inch to left of nipple line in the seventh interspace.

There were no tenderness, no rigidity and no

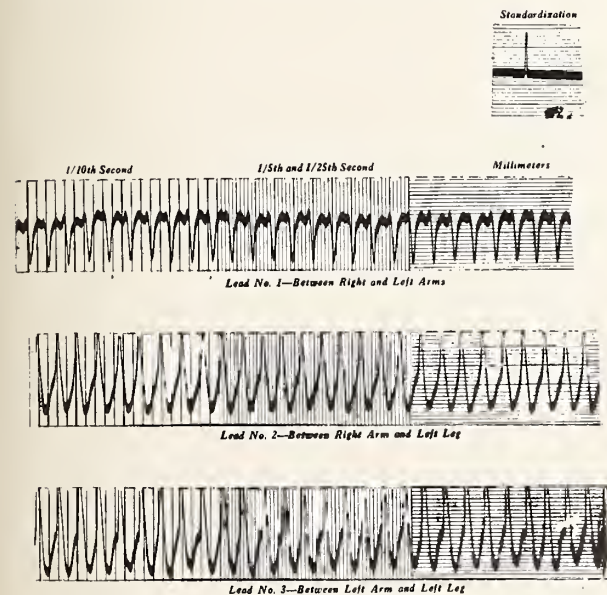


Fig. 1. Case 3. Ventricular tachycardia. Rate 300 per minute.

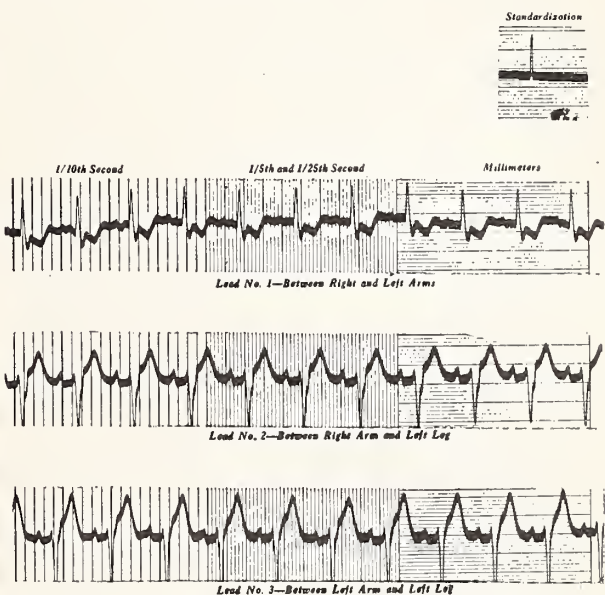


Fig. 2. Case 3. Normal rhythm. Right bundle branch block.

months and from there he went to the Detention Home for a period of about three years, when he felt fine and then began to have shortness of breath again which came on with an attack of the grippe. At this time he went to Harper Hospital, where he stayed fourteen weeks, and was relieved for about one year and he again went to Shurley Hospital for ten weeks and since then has had what he calls heart "spells" with considerable pains. In the past year has felt good with the exception of his heart spells. On the night before admittance, he had several attacks of sharp pain and a feeling over the heart, with sharp shooting pains down the left arm.

The patient states that outside of present condition he has never been ill.

There was swelling of the feet and ankles; no night sweats; no loss in weight. There was no nausea, no constipation, no vomiting. Appetite was good. Bronchial colds were infrequent; sore throats, infrequent. Urine: night, none; days, 4 and 5 times. There was no pus, blood and no burning.

Working diagnosis: Endocarditis, mitral insufficiency, aortic regurgitation.

There was no impairment of vision; pupils were round, equal and reacted to light and accommodation. There was no discharge and no obstruction in the nose. No impairment of hearing and no discharge from the ears. Tongue was normal. Teeth showed one cavity; otherwise in good condition. Tonsils had been removed. Throat was normal. Glands showed no enlargement; thyroid, no enlargement.

Chest examination revealed the patient to be poorly nourished and developed. Percussion note was resonant. Respiratory movements were labored.

masses in the abdomen. Genitalia were apparently normal. Extremities revealed no paralysis nor deformities. Vessels showed slight sclerosis and no varicosities. Nervous and mental reflexes were present and equal on both sides.

Wassermann test was negative—R. B. C., 4,606,000; W. B. C., 11,800; polymorphonuclears, 61%; lymphocytes, 38%.

Urinalysis: Specific gravity, 1.030; no albumin, no sugar.

This patient had attacks of typical angina pectoris, both by day and night, which were relieved by amylnitrite, having used as many as a dozen perles of amylnitrite during a single night.

This patient developed pneumonia in the spring of 1928 and died after a short illness.

Case 2.—W. E. F. White, male physician, age 58.

Family history was of no importance. Patient had diphtheria fifteen years ago, a short severe attack. Two years ago, glycosuria was discovered; says he has been on a careful diet since that time, arranged by himself. Wednesday night, November 3, while shoveling coal, he had pain on the inner aspect of the left elbow in a small circular area and the next morning, the left ulnar nerve was sore. That night there was an attack of difficult breathing while sitting in a chair. The night's rest was very poor, the pulse weak and thready. At the time of the first examination on Friday, November 5, the heart rate was 100 and the heart's action regular. There was no definite cardiac enlargement made out. While the night before the systolic blood pressure was 200, at the time of examination it was 155. Patient said the night before the heart's action was absolutely irregular. The chest was full of moist râles and cyanosis

was present. On Saturday, November 6, the pulse rate was 90, heart's action absolutely irregular, temperature 98.6, while the night before the temperature had been 100. No definite enlargement of the heart could be made out. The cardiac rate was 128 and respiration periodic in type. On Sunday, November 7, the temperature was 99.8; pulse 104; cardiac rate 138; systolic blood pressure 140; diastolic 100. On Monday, the eighth, temperature was normal; pulse 110 and regular; auscultatory rate 112; respiration 20. There was a slight pericardial friction rub heard in the third and fourth left intercostal space, close to the sternum; also a few crackles at the lung bases. On November 9, the pulse rate was 114 and regular; systolic blood pressure 170; diastolic 120. Pericardial friction rub was still present. During the night, the patient suddenly became worse and died.

Laboratory findings by Owen Clinical Laboratory were as follows:

November 6.—Blood sugar, 476 mgms. per 100 c.c. of blood; blood-count, R. B. C., 4,360,000; hemoglobin, 85 per cent; index, 0.93; W. B. C., 22,100; polymorphonuclear leukocytes, 88 per cent; lymphocytes, 8 per cent; large mononuclears, 4 per cent. Red blood cells are normal in size, shape and staining.

November 8.—Urinalysis—Appearance, normal, clear; specific gravity, 1.022; reaction, acid; moderate amount of albumin, no sugar, diacetic acid none, no bile nor indican; many granular casts, no pus or blood; centrifuged sediment moderate.

Case 3.—L. S., white, male, age 25 years.

All members of the family were reported as alive and well. Chief complaint: Palpitation and shortness of breath, also dizziness.

The patient while going up the stairs a week ago Sunday noticed his heart began to beat very rapidly. In a few minutes he broke out in a sweat and became very pale and also became short of breath and felt very weak. He was unable to walk to the street and get in a taxi to go to the doctor. He was unable to sleep that night, and was brought to the hospital in the ambulance the next day. He stated he has never fainted but has felt dizzy for about six days; that his heart beat has gradually become slower, and he has not had any pain in the cardiac region for the last two days. Patient stated he has been very restless and could not sleep at night.

The patient gave a history of head colds and frequent sore throats. No history of typhoid fever, smallpox, scarlet fever, diphtheria, tuberculosis or syphilis. Patient says he has had gonorrhea. The patient slept well before he became ill; at time of reporting to hospital he was unable to sleep very well. Bowels were regular. He was not troubled with night frequency.

The patient lay propped up in bed and did not appear acutely ill. He was described as having brown hair, blue eyes. Teeth were in good condition. Skin

was moist, had good elastic qualities, no eruptions. Pupils were round and symmetrical and reacted to light and accommodation. Hearing was good, no obstruction, no discharge or bulging, no mastoid tenderness. Tonsils were hypertrophied; no discharge. Neck revealed no abnormal pulsation; thyroid was not palpable. Chest was symmetrical. Percussion, normal lung resonance.

Cardiovascular rate was 208 per minute. Heart sounds were too rapid to hear murmurs.

Liver, spleen and kidneys were not palpable. There was no evidence of hernia; no masses, tenderness or rigidity; no surgical scars; no swelling or edema of legs or ankles. Knee-jerks were not obtainable.

W. B. C., 31,200; polymorphonuclear leukocytes, 90 per cent; hemoglobin, 80 per cent; R. B. C., 4,420,000.

September 1, 1928, ventricular rate as shown by electrocardiogram was 300 per minute and the diagnosis of ventricular tachycardia was made.

September 5, 1928, cardiac rate was 105 by electrocardiogram and right bundle branch block was present. Lips were good color; lungs clear; no edema; feet cold.

September 4, blood pressure was 106/95. September 7, much improved.

Urinalysis, August 28, gave appearance, amber, cloudy and red; reaction alkaline; albumin, trace, and sugar present.

Final diagnosis—Coronary thrombosis with ventricular tachycardia.

Prophylaxis: The habits of life in regard to food intake may have a very important bearing on the incidence of arterial disease, and so of the diseases under consideration. High protein intake, with the use of highly seasoned food, is an important predisposing factor. Alcohol and syphilis combined have a very deleterious influence on the vascular system, and with the contraction of syphilis alcohol should be interdicted. In the production of coronary thrombosis infection is probably a large factor, and in people of middle age the enforcement of a long rest period after such infection may be a most helpful prophylactic measure. Exercise of a not too strenuous type, such as golf, which engages the whole musculature, thus increasing general bodily metabolism, and causing the more thorough elimination of toxic waste products, is also very important.

SOME ASPECTS OF THE MANAGEMENT OF CORONARY THROMBOSIS AND ITS COMPLICATIONS*

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Until recent years the diagnosis of coronary thrombosis with infarction of the heart was made almost entirely by the pathologist. The clinical picture of this condition was understood little previous to 1910. In the study of the massive literature on angina pectoris one finds many of the features of coronary thrombosis interwoven in the characterization of the so-called fatal cases of angina pectoris. However, the first satisfactory account of the clinical features associated with coronary thrombosis and infarction of the heart did not appear until the publication of Obrastzow and Straschesko,¹ in 1910. They emphasized three symptoms: severe, lasting, retrosternal pain; dyspnea; and gastralgia. In 1912, Herrick² published a most important contribution in which his classification of this condition indicated that not all of these cases are necessarily fatal. Since that time numerous important publications have appeared, some of them dealing with clinical features in general, and others with the more special features of the disease. The articles of Wearn³ and Hamman⁴ have been outstanding among those having to do with general clinical features. Most of the literature has been occupied with a presentation of the pathologic findings, the diagnostic survey, and characterization of the complications of coronary thrombosis. It is not surprising that the interest in such a dramatic clinical picture has been focused so predominately on the diagnosis rather than on the treatment of this tragedy, and especially so when one realizes that it has been considered to be almost always immediately, or very shortly, fatal in its outcome. By this time enough cases have been studied and followed to demonstrate that many do not die immediately as a result of the acute insult, but actually return to an active and comfortable life for months or even years. Recently Levine and Brown⁵ have reported such a series of 145 cases, describing the various clinical features, and it is largely from the experience with many of these cases that the author presents some of the aspects of the management of coronary thrombosis and its complications.

Perhaps, for the purpose of correlation with subsequent statements, it is fitting at this time to review briefly some of the clinical features, particularly those of diagnostic importance.

The whole clinical picture is dependent upon a single event; namely, the occlusion of a coronary artery or one of its important branches. This occlusion is due most often to the formation of a thrombus on an arteriosclerotic base. Attending this obstruction there is a variable degree of interference to the blood supply, and resultant necrosis of heart muscle. If this necrosis is extensive enough to involve the endothelial surface, mural thrombosis occurs, and if the pericardial surface is involved a fibrinous pericarditis may result. If the myocardial necrosis lies in the path of the conduction system serious arrhythmia may develop. If death does not ensue before an adequate time has elapsed, healing of the infarction takes place as in any other organ.

In the clinical picture, the most typical symptom is that of pain. Characteristically, a severe painful discomfort usually unlike the patient has ever experienced before, appears suddenly and is felt under the sternum. This discomfort may be a sharp or a dull pain; it may be a feeling of pressure, vise-like in character, or a feeling of oppression. Individual patients describe it differently. It may be a terrific exaggeration of the pain similar to that experienced in previous attacks of angina. Typically, it is most severe under the sternum rather than out in the region of the apex. It may be most severe under the upper end of the sternum, or located even in the epigastrium. It is the upper abdominal distribution of pain that is confused so often with acute surgical abdominal conditions, such as ruptured gastric ulcer,

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gall-stone colic, acute appendicitis, and acute pancreatitis. The pain may possess all the vagaries of distribution of radiation that are characteristic of angina pectoris. In contrast to angina pectoris the pain may last hours or days rather than seconds or minutes. The pain of coronary thrombosis may, and in fact often does, come on without exertion.

The attack is accompanied by the general picture of shock, the patient having a cold moist skin with ashen color. Nausea and vomiting may occur during, or even initiate, the attack and these symptoms together with upper abdominal pain account for the erroneous diagnosis of acute indigestion, so often mentioned in the headlines of the daily newspapers. Dyspnea out of proportion to other evidence of circulatory insufficiency is common.

The important physical findings include weak, distant, or almost inaudible heart sounds, especially the first sound at the apex. The systolic blood pressure is usually lower than its level previous to the infarction, and the pulse rate may be slightly accelerated. These findings are in contrast to those of angina pectoris, in which the blood pressure remains unchanged or is apt to rise, and often the pulse rate is unchanged. Soon after the beginning of the attack it is common to find some degree of fever lasting from a few days to a week, and during this time there is a moderate leukocytosis.

In the atypical cases the diagnosis will be difficult and may depend entirely on the discovery of one of the critical signs, such as pericardial friction rub, unusually low blood pressure, or the characteristic electrocardiographic changes.

The clinical recognition of this diseased condition is so young that no very definite precedent in treatment has been established. The treatment is organized partly on a basis of theory, having in mind the pathologic physiology of the underlying process, and partly on the basis of experience.

In general, the management may be discussed under the following three headings: the acute attack, the period of recovery, and the complications. In those cases in which the course of the attack is simple, the treatment can be expressed in the form of a few general principles. Much will depend upon the recognition of complications and the intelligent treatment of them. Obviously, whether complications exist or not, the

situation demands as much rest as can be obtained for the cardiac muscle.

During the acute attack two important features are observed; namely, the terrific painful discomfort and the state of shock. How is the pain to be relieved? This is one condition in which very large doses of morphine are justified. The initial dose may be one-half grain. The morphine not only aids in relieving the pain but also helps to produce mental and bodily rest. Nitroglycerin may be tried but should not be used if the systolic blood pressure is 100 mm. or lower. Very occasionally light ether anesthesia may be justified to relieve the pain. Shock in coronary thrombosis is to be managed much the same as when found in other conditions, except that stimulation is to be avoided if the peripheral blood pressure is sufficient to maintain adequate circulation. A systolic blood pressure of 100 mm. of mercury is usually taken as a criterion of sufficiency. If the pulse is imperceptible, caffeine-sodiobenzoate 0.5 to 1 gram may be given intravenously; or strophanthin 1 milligram intravenously; or adrenalin 0.5 c.c. intramuscularly may be used. In general, intravenous therapy, such as fluids in large amounts, is to be avoided as a greatly increased volume of fluid injected directly into the blood stream may embarrass the circulation still further. The body should be kept warm by blankets, hot-water bottles, or other forms of local application.

A very important caution is to do nothing that will cause the patient any muscular exertion. He should not be allowed to attempt even to turn himself or to get up from the position where he has fallen. Certainly he should not be allowed to walk, and it may be wise to put him at rest temporarily on the spot where he collapses, if at home, or moved with the greatest care, and without so much exertion as the moving of a hand, on the part of the patient. Such slight exertion at that particular time may deprive him of the chance to live. The physician should refrain from elaborate examination, and visitors are to be restricted.

The patient has passed through the attack of pain and is fairly comfortable at rest in bed. The period of recovery varies greatly in individual cases, and anywhere along this period any one or more complications may arise. During this time the hazard may be likened to that of sitting on a bomb that may explode any minute. What is the plan of

management now? Absolute bed rest still is imperative. How quiet should he be and for how long? He should remain as quiet as possible for several days. The continued use of morphine may be justified for several days; however, in many instances the common sedatives, such as bromide, or luminal, may suffice. He should be spared the effort of feeding himself for the period of three days to one week. He should not have to use the bed pan more than once daily; slight constipation is a desirable occurrence during the first few days. This may actually occur as part of the effect of the morphine used. How long should the patient remain at rest in bed? For at least one month, and preferably for six to eight weeks. Under no circumstance should compromise allow him up before the end of one month. Rupture of the heart may happen up to the end of the second week or even later after the onset; I have seen sudden death upon sitting up in bed for ten minutes at the end of three weeks after the attack.

During the period of recovery little in the way of treatment, other than that described above, is necessary unless complications arise. The common complications of coronary thrombosis may be grouped as follows: disturbances in cardiac rhythm; mural thrombosis of the heart chambers with or without dislodgment of a piece of thrombus and resultant embolism in a remote part of the body; fibrinous pericarditis; rupture of the heart; acute pulmonary edema; and circulatory insufficiency with all the findings of congestive heart failure.

The very nature of the primary underlying process makes one of many arrhythmias possible. Varying degrees of heart block may occur; possibly only a simple delay in conduction time resulting in regular heart rhythm without the blocking of beats, or actual partial or complete heart block may occur. Ventricular extrasystoles are common. Auricular fibrillation, especially of the paroxysmal type, is fairly frequent. In the series of cases reported by Levine and Brown⁵ there was no indication that any one of these three types of arrhythmia influenced the general prognosis. A most important arrhythmia, however, is ventricular tachycardia, either paroxysmal or persistent, and intelligent treatment of this condition may be life saving. The presence of ventricular tachycardia indicates serious prognosis.

There is not time or space here for considering the diagnosis of these cardiac arrhythmias. However, it seems worth while to mention some of the features that may help to differentiate ventricular tachycardia from auricular tachycardia at the bedside. Careful auscultation over the precordium for a long period of time likely will reveal that in the main the rhythm is regular, but at intervals a slight irregularity may be detected in ventricular tachycardia, whereas in auricular tachycardia the rhythm is constantly regular. Ventricular tachycardia is uninfluenced by vagal pressure, while auricular tachycardia may be entirely arrested and auricular flutter temporarily slowed by vagal pressure.

The discussion of the treatment of the arrhythmias here may be limited to the consideration of heart block, auricular fibrillation, and ventricular tachycardia. Partial heart block may demand no special therapy. If complete block occurs it may be unaccompanied by any severe symptoms. If the block is accompanied by the symptoms of Adams-Stokes syndrome, adrenalin or barium chloride may be used. Adrenalin 0.5 c.c. may be injected intramuscularly, and repeated as necessary. In rare emergency where there is long heart pause 0.5 c.c. of adrenalin may be given directly into the heart. If attacks of Adams-Stokes syndrome are frequent, barium chloride 30 milligrams may be given three or four times a day, by mouth. For a more lengthy discussion of the beneficial effects of barium chloride in this type of arrhythmia the article of Cohn and Levine should be consulted.⁶

Paroxysmal auricular fibrillation may not be accompanied by any symptoms. If attended by evidence of circulatory insufficiency, the proper measures to support circulation should be employed, such as digitalis and caffeine. Persistent auricular fibrillation demands proper digitalization.

The development of ventricular tachycardia is serious because the severely injured heart cannot maintain long at the rate of 150 to 200. Quinidine has been found effective in this complication of coronary thrombosis. It is a dangerous drug and should be used with the same caution here as in any other instance. As high as 1.5 gram of quinidin sulphate was given five times in twenty-four hours before normal rhythm was established in a case reported by Levine and Fulton.⁷

When mural thrombosis develops in the ventricular chambers of the heart, embolism may occur in the peripheral or pulmonary circulation, depending on whether the mural thrombus is in the right or left ventricle. When these catastrophes occur there is little to offer in the nature of treatment, other than general supportive measures. The same may be said for the management of rupture of the heart. Apparently spontaneous rupture of the heart always is fatal in a very short time.

Acute pulmonary edema occasionally occurs, and when it does is most likely during the early days of the attack. The usual measures are employed here, the same as when acute pulmonary edema is encountered under other circumstances. If cyanosis is a prominent feature oxygen is apparently of some value.

In the management of congestive heart failure complicating coronary thrombosis, the same general measures employed in other types of heart disease may be followed, namely absolute bed rest, limitation of fluids, and the adequate administration of digitalis. The indications for diuretics and phlebotomy are the same here as in other instances of congestive failure. Congestive heart failure is encountered most often two weeks or more after the onset of the attack. This is fortunate because probably it is much safer to use digitalis at that time than it is during the first few days of the attack. This brings up a point on which all physicians do not agree; namely, the use of digitalis in the treatment of coronary thrombosis. The author has felt that it is desirable to avoid the use of digitalis during the first few days following the attack unless

some special indication appears. Stimulation of the tremendously damaged heart during the early days seems surely more hazardous to the patient than stimulation at a later date when some degree of healing has taken place. Quite aside from the undesirability of stimulating the heart at that time, little can be expected from digitalis under the circumstances that prevail during the acute attack when the heart action is regular and the rate is normal or moderately accelerated. Also there is evidence of irritability of the heart muscle in coronary thrombosis in that ventricular tachycardia occasionally develops. It seems undesirable to give digitalis at this time because of the possibility of irritating further an already irritable heart muscle.

SUMMARY

The clinical features of coronary thrombosis, particularly those of diagnostic importance, are reviewed briefly. Special emphasis is given to the treatment, and the consideration is taken up under three divisions: (1) Treatment of the acute attack. (2) Management during recovery. (3) Management of complications.

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VITAL HORMONE REVIVES PROSTRATED ANIMALS

Studies with cortin, the vital hormone, were described by Dr. Frank A. Hartman, of the University of Buffalo, at the Detroit meeting of the Association for the Study of Internal Secretions. This hormone comes from the cortex of the adrenal glands. Animals from which both adrenal glands have been removed live a normal existence indefinitely if injected with cortin. Cats with both adrenals removed live an average of not more than eleven days if untreated. Prominent symptoms in these animals are loss of appetite, loss of weight and a lack of interest in their surroundings. The treated animals eat as much as or more than normal, gain weight,

play and fight. They recover from wounds and resist infections and show all the reactions of healthy animals. It has been possible to revive animals which were near death after removal of the adrenal glands by injection of the vital hormone. In a little more than an hour after the treatment, one animal sat up and in two hours was eating.

The cortin on which Dr. Hartman reported was prepared so as to be nearly free from epinephrin. This hormone is secreted by the medulla, that part of the adrenal gland which is not the cortex. Epinephrin has a strong restorative action itself, but animals can live without epinephrin or the part of the gland that secretes it, while they cannot live without the cortical part of the gland and its secretion.—Science Service.

THE RÔLE OF RHINOLARYNGOLOGY IN THE TREATMENT OF BRONCHIAL ASTHMA*

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The symptom-complex called asthma has long been a baffling problem to medical science and still demands of us every possible resource which we may command as an aid in relieving this distressed group of people. It is, therefore, paramount to have the closest teamwork between the internist and those specialties having a direct bearing on the subject. Speaking as a rhinologist, one feels that it is impossible to disregard the nose and throat in the survey of a patient complaining of bronchial asthma.

That we may have a common understanding of this symptom-complex, a classification is in order. This has come to be pretty generally the same where anyone has made such an attempt. However, the best grouping encountered was that recently given by Rackemann and Tobey.¹ They divided the asthmas into extrinsic, intrinsic and unclassified—the extrinsic including mainly the pollens and animal groups, and the intrinsic the bacterial infections and the nasal reflex types. To this classification, we have added a mixed group composed of the extrinsic and the intrinsic types, since some people are unfortunate enough to possess both. In our recent review of 746 cases of bronchial asthma at the Henry Ford Hospital Clinic, there were 310 extrinsic, 295 intrinsic, 124 mixed and 61 unclassified; the latter referring to incomplete data and cases with no demonstrable allergy or focal infection. It will be noted that the so-called cardiac group is purposely omitted from this classification.

No attempt is made in this discussion to present other than the rhinological aspect of this problem. Consequently the intrinsic group of focal infections in the nose and throat and the nasal reflex syndrome will command our attention.

We are attempting to answer, from the results obtained from this study and the experience of others, that ever momentous question: Does surgery in the nose and throat do any good in certain types of asthma, and is the service of the rhinologist worth anything to the internist and the patient in solving the difficulty?

At the outset, a fact must be recognized, that there is a definite reflex between the nasal mucous membrane and the musculature of the bronchi. To quote Sluder: "The sympathetic nerve supply in the nose is derived from the nasal ganglion. This receives its sympathetic supply from the vidian nerve, the great deep petrosal, the carotid plexus, and the superior cervical ganglion." Dixon and Brodie² have demonstrated that the vagus carried constrictor and dilator fibers to the muscles of the bronchi, and that stimulation by the galvanic current in the nose brought about the contraction of the bronchial muscles. Francis³ has used the galvano-cautery to the septum to relieve asthma. Every rhinologist of experience has at some time or another relieved an attack of asthma by cocaineization of the nasal mucosa in the region of Meckel's ganglion. While we recognize this nasal reflex syndrome as a definite entity, yet from the standpoint of its practicability with respect to nasal deformities, middle turbinate contacts and small polypi, we have not found that it worked to any appreciable extent in asthma when the above conditions were treated or corrected. If any results were obtained it seemed more reasonable to assume that better nasal drainage was the result and less bacterial infection absorbed.

Infection of the paranasal sinuses is the most fruitful source of bacterial asthma. Just why more people who have sinus disease do not have asthma one cannot answer, any more than he can the peculiarities of allergy. Polyposis is the outstanding feature of the sinus disease in adults. It is rarely seen in children. Polyposis far outshadows

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any pus formation; in fact there may be little or none of the latter demonstrable in many cases. Occasionally one encounters a simple empyema of the maxillary sinuses

7 clear; one of the latter washed pus. Some of these when X-rayed presented a questionable diagnosis which became clear when lipiodol plates were taken. An example of

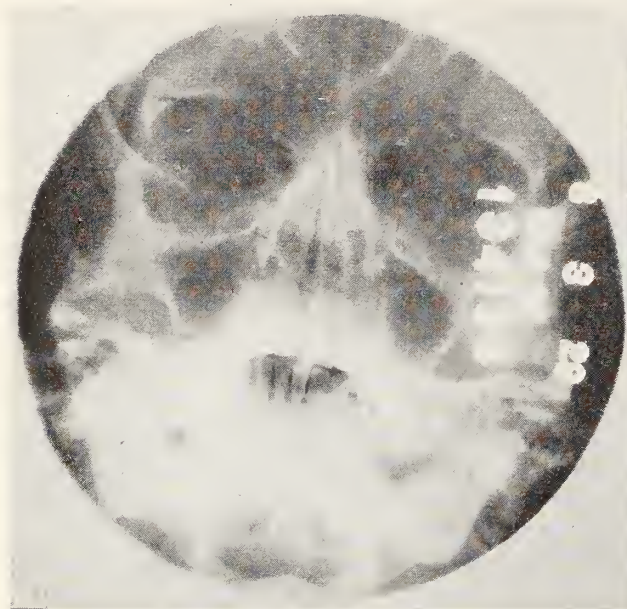


Figure 1. Plate taken before lipiodol was injected. The maxillary sinuses are not very definitely positive. They were only hazy to transillumination.



Figure 2. Very striking filling defects in both maxillary sinuses. At operation these cavities were filled with polypi.

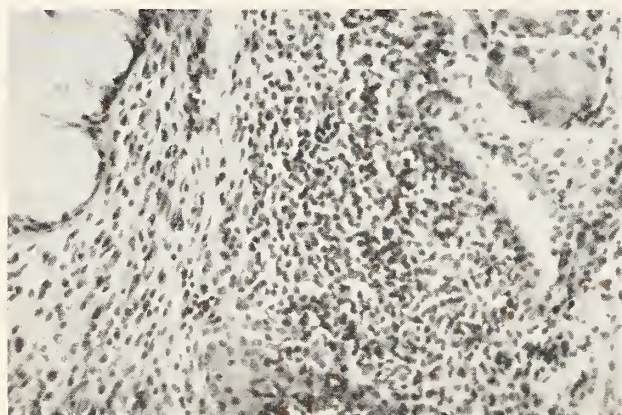


Figure 3. Microphotograph of polypoid tissue from the antrum of an asthmatic showing the increase of eosinophiles.



Figure 4. Microphotograph of the tissue from a chronic maxillary sinus of a patient without asthma.

without polypoid degeneration, but this is not the rule. The diagnosis of polyposis or edematosis within a sinus has been greatly facilitated by the introduction of an opaque medium such as lipiodol into the sinus in question. This is of special advantage where the ordinary X-ray plate presents a doubtful picture.

In the 746 cases here reported, 164 had cloudy maxillary sinuses to transillumination. Of these 106 washed clear, and 59 returned pus; 96 were cloudy in X-ray and

this is shown in the accompany illustrations (Figs. 1 and 2).

This polypoid tissue seen in the above plate when examined microscopically showed a marked increase in eosinophiles. This has been noted by other observers. A contrast is shown between the mucous membrane of a chronic maxillary sinus without asthma and one with it.

We have not applied Sewall's cytology to antrum washings in relation to asthma cases, but, as experience grows, less atten-

tion is paid to sinus washings showing little or nothing and more to lipiodol studies.

THE SURGICAL TREATMENT OF THE
INTRINSIC AND MIXED GROUPS
OF ASTHMAS

OPERATIONS	Worse	No Improvement	Moderate Improvement	Great Improvement	Not Reported
Tonsillectomies		13	7	6	2
T & A		2	2	1	
Submucous		2	5	9	
Maxillary		12	21	9	2
Max-Ethmoid	1	4	7	7	
Ethmoid		1	1	1	
Max-Eth-Sph		1	1	3	
Eth-Sphenoid		2	0	0	
Pan-Sinusitis		3	2	0	
Max-Washings		0	4	4	
Tampons		0	3	2	
Polyps-Turbs		2	3	1	
Total	1	42	56	43	

Chart 1. The number of operations and results on 116 patients.

It is our opinion from a study of 116 cases in the above groups that surgery in the nose and throat does benefit in a sufficient number of patients to warrant the procedure. Dundas Grant⁵ in a recent review of his cases reported great improvement in 39 per cent, some improvement in 42 per cent and no improvement in the remaining 19 per cent. Rackemann and Tobey give about the same end-result in 1,074 cases of all types of asthma. Mathews⁶ found that 90 per cent of 300 asthmatics had the etiological lesion in the upper respiratory tract and that treatment was successful in proportion to free and continuous drainage. In our series, one was made worse, 30 not improved, 42 moderately improved, and 43 greatly improved. All in the last group were free of asthma one year or longer; some of these might be considered cured for they have been without asthma as long as four years. However, we prefer to avoid the term cured in such a problem as asthma, remembering that some cases may go a number of years quite independently of medical care before having another attack.

We were struck with the slight benefit derived from tonsillectomy. This was more manifest in first-hand study of the records than in the above chart. However, one very striking case of quinsy was followed by asthma; the latter disappeared on proper disposal of the tonsils. Simple empyema of the maxillary sinuses brought some fascinating results just from washing alone, these mainly in younger people. Submucous

resection in properly selected cases is of value mainly in providing better drainage. The pure maxillary sinusitis with polyposis has been the most gratifying, but when associated with ethmoiditis the results have been least fruitful. Whether the bacterial protein in these sinus cases is the trigger mechanism, or the pathological changes it has produced, we are unable to answer; but surely from the results shown here and the reports of others, the removal of these pathological changes in the nose—whether purely hyperplastic or bacterial or both—does benefit in over 50 per cent of the cases. Without the removal of either or both of these above offending agents, hopes for improvement cannot be expected. 43 cases in the bacterial sinus group were not operated upon where operation was indicated but refused, and none of these improved even though vaccines were given.

COMMENT

It has been our contention that palliative measures in adults have rarely been worth while. When there is obvious disease in the nose in an asthmatic patient radical procedure is in order. This will obviate that frequently repeated expression, "too many nasal operations." We are assuming, however, that the proper diagnosis has been made and that unnecessary and non-essential minor operations have been excluded. Every rhinologist who is fair to himself and his colleagues will admit that he has to occasionally reopen maxillary sinuses done by the Caldwell-Luc method and may relieve his patient by taking out only a small area of granulations or recurrent polypi. We are never sure of obliterating the ethmoidal labyrinth, especially by the intranasal route. This makes it occasionally necessary to do the external operation. We must face the fact that our asthmatics will not get along well as long as there is inadequate drainage or diseased tissue remaining; hence, additional operations often become necessary. This is frequently the result of a fresh cold that lights up an otherwise quiescent condition.

It has been our observation that the greatest improvement is to be expected in those who have had asthma less than five years, and who are below the fifth decade.

Up to the present little has been said relative to asthma in children, but it has been our experience that palliative measures, such

as suction, tampons, and occasionally washing of maxillary sinuses have been of definite benefit.

CONCLUSIONS

In conclusion, we believe that whereas some patients are not improved, and occasionally one may be made worse, the great majority receive some benefit from nasal surgery, and those familiar with asthmatics will certainly agree that any improvement is decidedly worth while.

Every asthmatic should receive a careful nose and throat examination.

There should be the closest coöperation between internist and rhinologist in the treatment of bacterial asthma.

Over half of our series of cases were bacterial or mixed in character.

Sufficient improvement is obtained from nose and throat surgery to justify such procedure in all cases showing pathology in the nose and throat.

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TUBERCULOSIS IN CHILDHOOD

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Tuberculosis in childhood has as many forms as it has in adults. It attacks as many different organs and has perhaps more clinical variations. There are distinct differences in its behavior and the diagnosis, prognosis and treatment differ considerably from those in adult life. The study of the disease in childhood has been somewhat confused in the past because few physicians consider all aspects of tuberculosis, and those interested in tuberculosis have not been entirely familiar with the peculiarities of the disease as seen in childhood. Some misconceptions and false teachings have arisen due to these different points of view and have clouded the understanding of the medical profession. For example, a majority of physicians believes that the tuberculin tests mean nothing after early infancy and that most children are infected in the first few years of life, and practically all by puberty. Such views handicap us in the treatment of tuberculous children because they start with a false conception of the importance of infection with tuberculosis. It is practically impossible to discuss the whole subject in a short paper, therefore merely the most important phases may be touched upon.

In the first place, the bacillus is inhaled or ingested by the child and a lone lesion results somewhere in the body, generally in the tonsils, adenoids, lungs, or intestines. The regional lymph nodes then become affected in a short time. These local lymph

nodes are poor filters and some bacilli always reach the lymph stream, and then through the blood stream are carried to the lungs. In the lungs, they are again taken out into the lymphatics by phagocytes and are carried to the bronchial lymph nodes. Therefore, the latter are nearly always involved at an early stage, even when the primary lesion is elsewhere than in the lungs.

The further course depends upon the resistance of the child. The disease in the regional or bronchial nodes may heal by fibrosis. It may become latent or encapsulated. It may go on actively. It may extend to further nodes in the chain, to adjacent structures, or to distant parts through the lymph or blood streams (bowels, meninges, lungs, etc.). In other words tuberculosis becomes cured, latent or goes on to activity and extension.

Much, if not all, tuberculosis begins in childhood. We do not at present know whether the adolescent disease is a lighting up of an old process or a new superimposed

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infection. In either case, childhood is the most important age period in the history of the disease because it is the true incipient stage, the very beginning of all tuberculosis.

A great many children are infected early and show no signs nor symptoms because the initial lesion is small and the local or bronchial nodes are able to handle the disease, which remains latent or perhaps is cured. Other children go on to develop active tuberculosis in some organ where it can be recognized. But in both cases there has been a tuberculous infection and no one can tell whether it is under control or smoldering along, waiting to flare up. Therefore both should be attended to with the same respect, the infected children as well as those with manifest evidences of the disease. The danger in the terms "infection" and "disease" lies in the indifference of the profession to the seriousness of the infection and to the belief that all children are infected. This idea is based on the early figures of Hamburger and Pirquet from Vienna, notoriously the most tuberculous city in the world. American statistics are far different and show less than half the incidence found in Europe and within recent years the reaction to tuberculin is becoming less and less. If we accept the common view that a positive tuberculin reaction means nothing (except in infancy) we lose our greatest opportunity of combating the disease in its inmost stronghold, when we have our best chance of wiping it out. We must make the diagnosis as soon after infection takes place as possible, before activity and extension begin, and not wait until important or vital organs are attacked by tuberculous disease.

Infants who become infected are only occasionally able to resist the disease and generally go on to activity, extension, and death from general miliary, pulmonary, or meningeal tuberculosis. They, therefore, ought to be protected from contact with tubercular patients. The latent stage occurs mostly in older children over two years. When we come to make a diagnosis of tuberculosis on these children, we must bear chiefly in mind that we are not seeking pulmonary but rather lymphatic tuberculosis. Lung signs are infrequent and, if present, denotes a very late stage. In making a diagnosis with tuberculosis in mind, we must answer three questions:

1. Has the child been infected with tuberculosis?

2. Is the disease active, latent, or cured?

3. What is the site of the disease?

The first question is answered by the tuberculin skin reactions in the majority of the cases. A positive reaction merely means that a child has been infected at some time in his life, that is, that the tubercle bacillus has lived and grown in his body. That is all the information that the tuberculin reaction gives to us. It answers only one question: has the child been infected?

In passing, I might mention that the intradermal tuberculin reaction is at least twice as accurate as the Von Pirquet, but has the single disadvantage that the solution must be freshly prepared.

If a child reacts to tuberculin, then the second question must be answered: is the disease active? This is told by general rather than local signs. These are:

1. Fever—an irregular temperature over 100 degrees Fahrenheit, in rectum.
2. Languor, easy fatigue, anorexia, etc., are frequently reasons for bringing the child to the physician.
3. Malnutrition or failure to gain weight may be the only symptoms.
4. Anemia or increasing pallor are often noted by the parents.

The above symptoms may be the only evidence of activity for there may be no physical signs nor symptoms of lung involvement.

The site of the disease offers greater difficulties even when it is active and fairly extensive. In disease involving the meninges, bones, joints, peritoneum, or pleura, the diagnosis is seldom long obscured and need not be considered here. Pulmonary tuberculosis is seen in two main types in childhood. In infants, it starts from the hilus as a rule and extends rapidly outward to cause an infiltration or massive consolidation of the lung. The second variety is that seen in considerably older children in whom the disease more clearly approaches the adult type. Pulmonary involvement is rare between the ages of two and ten. If there are evidences of lung pathology between the ages of two and ten, a careful search will show that it is caused by a focus of infection in the upper respiratory tract. Lymphatic disease is by far the most common type. The cervical nodes are easy of access for examination, the mesenteric nodes may be felt or shown by X-ray, but the bronchial nodes, the most common site of localization,

no matter where the initial lesion is located, offer difficulties. They give few signs at best and may give none at all even though large. The only signs of value are dullness on percussion and the D'Espine sign. This sign (a tracheal whisper heard *after* the spoken voice) may be present normally over the cervical and upper dorsal vertebrae. It is positive if heard below the second dorsal vertebra. This sign in the past offered a subject for debate as to its value, but statistics have quite conclusively proved that the sign is positive in the great majority of cases that react to tuberculin.

When we have made the diagnosis that the child has been infected and have decided whether the disease is active or not from the general symptoms, we have gone as far as possible in many cases. The site of the lesion offers the greatest difficulties. But after all, if we can rule out active disease of vital organs, we can treat the patient with intelligence and try to keep him from ever developing recognizable disease. The X-ray corroborates our findings of the site of the lesion. Ofttimes it discovers the site of the lesions where our physical findings give us no clue. The interpretation of the plates of the chest I leave to the roentgenologist. But in passing, I would suggest that, in taking the plates of the chest in suspected patients, a lateral view be included.

The treatment of a child with tuberculosis is much like that of an adult, always remem-

bering that we are dealing with a child. He needs a regime, hygiene, and diet quite different from that of adults in health as well as disease. We should keep certain principles definitely in mind. If there is activity (fever, no gain in weight, etc.) rest in bed is essential, with proper feeding, air, light, etc. If a child has no fever and is gaining and growing well, his disease is probably latent and he needs merely the care and regime of a normal child plus a little extra care. He should be protected especially from excessive fatigue, and rest after lunch is essential. Cod-liver oil is certainly indicated. Every effort should be made to keep up the nutrition, which is our best guide to resistance. The weight curve must be watched just as carefully as the temperature curve in a child known to be infected, as activity is thereby suspected. Ultra-violet light is indicated if the site of lesion is in the glands and should not be used when the parenchyma of the lungs are involved.

Tuberculosis is not a universal infection but on the decline, in this country, at least. We must learn to recognize and treat it in its early or latent stages in childhood when we have our greatest hope of curing the individual and stamping out the disease. Children have a fairly good resistance normally and if watched and cared for will generally conquer the infection if they escape the meningeal, bone, and other accidents which cannot be foreseen.

CHILD'S MENTAL HEALTH IS CONCERN OF MANY GROUPS

Neither parents nor teachers nor doctors nor any other single group is entirely responsible for the mental health of the child, members of the American Medical Association were told at their annual session in Detroit. "It should be the concern and intelligent interest of doctor, teacher, parent, psychologist, clergy, psychiatrist, social worker, public health nurse and every other constructive force of our social organization that comes in contact with the welfare of children," said Dr. Esther Loring Richards, of the Johns Hopkins University School of Medicine.

One of the commonest causes of maladjustment resulting in mental or nervous disturbance is a discrepancy between the child's ability and what is demanded of him at home and school, Dr. Richards said. Very often a child is "bad" or "nervous" because of poor training in emotional as well as physi-

cal habits. Physical defects handicap a child mentally and emotionally as well, and much of this handicap could be avoided by better treatment at home, at school, in industry and in social relations.

Unwholesome social conditions are too often overlooked as the cause of strain on children and they are much more difficult to remedy than physical ailments. Studies of adults who break in middle life are teaching physicians a great deal about the temperamental equipment of childhood; some children are equipped to stand the strain of life well, while others seem to have their nervous systems put together the wrong way.

Another important aspect of the mental health of childhood is the need for outlets for energy in the form of play and well directed recreation. Physicians are constantly confronted with patients who have broken under the strain of life and in studying them there invariably appears a lifelong inability to relax.—Science Service.

HORMONE INFLUENCE IN RICKETS* PRELIMINARY REPORT

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To everyone who has carefully observed rickets must have come the thought that more than just chemical and vitaminic deficiency has contributed to this widespread condition of infancy and childhood.

For example, let me offer this specific demonstration of the fact that other elements must be contributory. Twins that I was able to watch from birth to late childhood present these interesting facts. One child, a girl, grew to be a perfect specimen. The boy, on the other hand, became one of the most advanced cases of rickets I have ever observed. One must know, first of all, that there was a history of rickets in the maternal progenitor. I mention this in passing, to bring to your attention the possibility of so-called congenital rickets.

Now, this is the important thing in the case. In spite of the fact that the boy was handled in exactly the same fashion as the girl by an intelligent mother, two entirely different individuals developed. The feeding was exactly the same in both cases. One large formula supplied the food for both during infancy. Feeding during early childhood also was identical, both receiving the same amount of cod liver oil and the amount was what is considered sufficient. Both enjoyed the same good hygienic care, and in spite of it the boy became the horrible case of rickets.

The question arises: How does such a thing occur, and upon what basis is it to be explained? In our clinic at the Children's Hospital of Michigan, many cases of cretinism pass before our gaze. I was struck from time to time by what seemed to me to be a resemblance of the facies in certain cases of both diseases. This stimulated the thought that thyroid deficiency also can contribute to the clinical entity we describe as rickets. Assuming that this might be the case, we proceeded with a study in animals (white rats) that had beyond a question of a doubt been given rickets. Our procedure was a very simple one. Rats previously given rickets were kept on a rachitogenic diet, the only addition being thyroid extract in varying quantities in the different colonies of rats. The thyroid extract was prepared by a high class pharmaceutical firm, and we were assured these products contained no

parathyroid gland. The feeding both before and after the addition of thyroid to the rachitic diet was in the hands of highly trained and experienced workers in a nutritional chemistry.

As you know, two elements will contribute to the healing of rickets in rats where no treatment has been instituted. The first and most important element is time. Rats allowed to go beyond a certain period of days will, in spite of the fact that rachitic diet has been continued, show upon post-mortem examination spontaneous healing, no anti-rachitic measure having been resorted to.

The other important element is loss of weight due to starvation. Every animal in this experiment took during the period under observation a sufficient quantity of food. In under-fed rats, one also gets spontaneous healing. Every effort was made to eliminate these factors. Time we could easily control. Loss of weight was beyond our control, but was never due to starvation. I shall not at this time burden you with a description of the living conditions of the animals. All animals were killed at the end of the same day period. At the very outset, we were faced with the problem of how much thyroid to feed. We could find no data that could offer satisfactory information on this point, so we started with the largest amount that the individual animal or colonies could take. In all, ten groups were included in this experiment. The accompanying chart prepared by one of us will show clearly our results.

SUMMARY

1. Rachitic rats kept on a rachitogenic diet to which only thyroid gland has been added show healing by the line test.

*From the Nutrition Research Laboratory of the Merrill-Palmer School and Children's Hospital of Michigan.

EFFECT OF THYROID ON RICKETS IN RATS

Series Number	Lot Number	No. of Animals		Dosage Thyroid Powder Mgm.	Change in Weight on Thyroid	Healing (Line Test)	REMARKS
		Exptl.	Control				
VI	1	5		100	Lost	4 + ^c	One discontinued. Received rachitogenic diet 5 days before thyroid was started. Two died after 9 days on thyroid, 1 after 13 days. Two discontinued as unsatisfactory.
V	1	4	1 pos. ^a	32	Lost	1 + 1 ? 2 —	Positive control died after 5 days on thyroid powder.
IV	1	4	1 pos. 1 neg. ^b	16	Lost	3 + 1 — ^d	Positive control died after 3 days on thyroid. Anemic and hemorrhagic.
III	1	4	1 pos. 1 neg.	8	Lost	3 — 1 +	
II	1	4	1 pos. 1 neg.	4	Lost	4 +	Positive control died after 4 days, cold, quivering, gasping for breath.
I	1	4	1 pos. 1 neg.	2	Lost	1 + 3 —	Positive control died on 9th day.
VII	2	5	1 pos. 2 neg.	0.8	2 lost 3 gained slightly	5 +	One negative control Showed healing
	3	6	1 pos. 3 neg.	0.8	Gained	6 +	One negative control Showed healing
	4	5	2 neg.	0.8	Gained	5 +	One negative control Showed healing
VIII	1	6	3 neg.	0.6	Gained	6 —	One negative control Showed healing
	2	5	3 pos. 2 neg.	0.6	Gained	5 +	One negative control Showed healing
IX	1	5	5 neg. 1 pos.	0.4	Gained	4 — 1 +	
X	1	5	5 neg. 1 pos.	0.2	Gained	3 — 2 +	
	13	62	12 pos. 27 neg.	TOTALS			

a. pos. designates positive control animal which received both cod liver oil and thyroid.

b. neg. designates negative control animal which received only the rachitogenic diet.

c. + = healing.

d. — = no healing.

NOTES

Series II-VI inclusive received the Macy and Outhouse rachitogenic diet for eighteen days and then thyroid was added for eight days more.

Series VII-X received the McCollum 3143 rachitogenic diet for twenty-one days and thyroid was added for seven days more.

2. The dose of thyroid for rats seems fairly well established. The "hormone" seems to have a curative effect in rickets.

TECHNIC OF LINE PROCEDURE

Since evidence of rickets develops at a different rate in the various bones, first in the ribs, next in the femur and tibia, and

later in other bones, it was decided to section the tibia for microscopic examination, this being a convenient member to deal with, and one showing early developments of rachitic condition. Moreover, by the time changes were in evidence in the tibia, changes would have set in in the femur too, so that it would be safe to interpret chemi-

RATIONS USED IN STUDIES ON THE EFFECT
OF THYROID ON RICKETS IN RATS

Macy and Outhouse ^a	
Egg albumin	grams 18.00
Yeast	6.00
Dextrin	71.75
H ₃ PO ₄	0.10
CaCO ₃	1.55
Salt ₃ mixture XXX ^c	2.60
Butter fat, 3 drops daily	
Ca—.622 grams per 100 grams	
P = .125 grams ration	
Ca/P = 5	
McCollum 3143 ^b	
Soft Wheat	grams 33
Maize	33
Gelatin	15
Wheat Gluten	15
NaCl	1
CaCO ₃	3
Twice optimal calcium content. Decidedly below optimum content of phosphorus.	
Ca/P = 4	
a. Outhouse, J., Macy, I. G., Brekke, V.: J. Biol. Chem., 1928, 78:132.	
b. McCollum, E. V., Simmonds, Nina, Shipley, P. G., Park, E. A.: J. Biol. Chem., 1921, 57:510.	
c. Osborne and Mendel Salt Mixture XXX.	
First published in footnote 3, page 132 of reference (a) above. It contains:	
MgCO ₃	grams 21.80
NaCO ₃	30.10
K ₂ CO ₃	118.60
HCl	95.30
H ₂ SO ₄	9.20
Citric Acid, H ₂ O.....	30.60
Fe Citrate	grams 6.34
11/2 H ₂ O.....	0.020
KI	0.079
MnSO ₄	0.248
NaF	0.0245
(SO ₄) ₂	

cal analysis of that bone as indicative of the condition in a rachitic bone.

The tibiae were dissected from the tissue and a median longitudinal section made with a sharp scalpel, the two halves of each bone being immersed immediately in 1.0 per cent silver nitrate solution, the clean cut surfaces being uppermost. Light from a carbon arc lamp was focused for 1 to 2 minutes upon these immersed surfaces, and under this light examination of the bones made under a binocular microscope. Calcium deposits in the bone showed up distinctly black, bony trabeculae and calcification in the provisional zone of calcification being therefore distinct.

(Sections were decolorized by immersion for two minutes in 1 per cent sodium thiosulphate which would dissolve any black precipitate of silver salts but leaves the black calcium line untouched in order

to be sure the black deposit represented calcification. C. F. S.)

The objective of highest power being used, a fairly detailed histological picture was obtained, it being possible to see in particular the arrangement of cells in the proliferative cartilage, and the calcium deposition (where present) between the cells of this zone. Bones giving a picture of active rickets are recorded as negative with regard to the line test. Such bones showed in the epiphyseal region, the cartilage band, with proliferation of cartilage cells toward the diaphyseal region; this proliferative zone dipped down in jagged strands due to invasion by sprouts of blood vessels. Immediately adjacent to this zone was a region free of calcification, a distinct metaphysis, lying, therefore, between the diaphyseal and epiphyseal region.

Such was the nature of the bone picture in the great majority of the control cases, where rats had been kept on Diet 3143 for the 21 to 29 day periods. When cod liver oil was added to the ration, healing of the rachitic lesion began; that is, calcium salts began to deposit, and the normal structure of the bone began to be assumed again.

Normally, healing may commence by deposition of calcium salts (chiefly phosphates) between the cells of the provisional zone of calcification. The zone of proliferative cartilage cells becomes narrower and of straighter, smoother margin and gradually the metaphysis becomes calcified. Changes such as those just described were seen to have taken place in the bones of those animals having had the cod liver oil incorporated in the ration after 21 days of Diet 3143. This deposition of salts in the provisional zone of calcification gave rise to a narrow black line (as seen under the microscope), the line being broken at times (since deposition started at several points at once), and at other times continuous, but of various widths in different cases, depending upon the degree of calcification.

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SUB-ARACHNOID ANESTHESIA*

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To Dr. George P. Pitkin, of Hackensack, N. J., the medical world owes a debt of gratitude because of his contribution of spinocain anesthesia to modern surgery. He has been an untiring worker, and has spent years perfecting the solution and developing the proper technic for its administration. Improvements made in the technic of administration and in the chemical agents used to produce spinal anesthesia will help to reinstate this form of anesthesia in the armamentarium of the average surgeon. Methods have been evolved which will allow the operator to control the blood pressure definitely, and also the height of the anesthetic in the spinal canal. Having mastered the control of the blood pressure and the control of the height of the anesthetic in the spinal canal, the two principal objections to the use of spinal anesthesia have been removed.

Jonnesco¹ used stovain with strychnin to prevent the depression of nerve centers to produce anesthesia as high as the neck. He states: "Even in the hands of the most experienced this method is still very dangerous, and the death rate is one to five hundred. The drug once injected is beyond the control of the surgeon."

Corning² in 1885 discovered that cocain injected between the spines of the eleventh and twelfth dorsal vertebræ produced anesthesia of the lower limbs. Bier produced complete anesthesia of the entire body except the head by the injection of small amounts of cocain in the sub-arachnoid space of the cord. Carbolic acid in small amounts must be added because the cocain cannot be sterilized by heat. Phenol may produce harmful results. Tropococain was brought out and it is boilable but is much slower in action.

Mr. Arthur Barker,³ England, believed that the specific gravity of the anesthetic solution played an important part in the localization of the anesthesia in the canal. DaCosta⁴ states that he has used stovain in a number of instances, and the anesthesia lasted for an hour or more and was followed by retention of urine in his cases.

Dandois⁵ reports that a case upon which he operated for traumatic rupture of the urethra, in which cocaine was employed, developed a paraplegia which lasted for two months.

Epsom salts was introduced by Blake,⁶

Haubold and Willie Meyer, and the anesthetic was slow in action and the anesthesia lasted from eight to fourteen hours. Blood pressure was unaffected, but life was endangered by embarrassment of the respiration.

Of the more recent investigators, Stout of Wisconsin uses novocain crystals and they are successful in his hands. He uses a method which he calls "Volume Control." The extent of the anesthesia is dependent upon the speed of injection and the volume of anesthetic injected into the canal. He uses ephedrin to control blood pressure.

Dr. Frank Kelly, of Detroit, who introduced the Pitkin Method in Michigan, states that the objections to spinal anesthesia in the past have been: lack of controllability, the transitory character of the anesthetic and the severe fall in blood pressure, which made the operators feel that spinal anesthesia should not be used in patients where blood pressure was below 100 mm. systolic.

The transitory anesthesia is overcome when using the Pitkin solution because of its viscosity; when it is injected into the spinal canal it remains in a homogeneous form, is absorbed slowly and does not diffuse in all directions. The blood pressure drop is controlled by the use of *intramuscular* injections of ephedrin.

Spinocain has a lighter specific gravity than the spinal fluid, hence the height and location of the anesthesia may be determined by proper tilting of the table, and the mixing of the spinocain with the spinal fluid. The mixing is called "expansion" of the anesthetic agent.

Spinocain solution, when used with the proper technic, insures one of a method whereby he can definitely control the extent of the anesthesia in different parts of the body, but it is not advocated for anesthesia

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above costal arch. Spinocain is in my estimation the safest of the spinal anesthetics at the present time.

The novocain crystals are successful in the hands of the trained surgeon. It has been my experience that before the advent of ephedrin the patient must be kept in a moderate Fowler's position to prevent a wide diffusion of the anesthesia. When cerebral anemia occurs the physiological procedure to follow would be to place the patient in Trendelenburg position to overcome shock.

Kelly suggests that an intercostal block be used in conjunction with spinocain when operating on the gall bladder, and it is a valuable adjunct for this type of surgical intervention.

INDICATIONS

Having used spinocain for every operation below the costal arch—these include cholecystectomies, gastro-enterostomies, appendectomies, hernias, cesarean section, rectal operations, prostatectomies, leg amputations, and fractures—we find a complete flaccid relaxation of the muscles and bowels. This relaxation is very striking in rectal operations, for the rectum is completely relaxed and almost everted, and the rectal pathology is easily accessible.

Results in fractures have been very satisfactory for there is such a complete relaxation of the muscles. In reducing fractures of the femur the fragments can be palpated and placed in alignment in most cases. In fractures of the lower extremities the bones may be molded in position with the fingers because the muscles offer no resistance.

When doing abdominal operations it is not necessary to traumatize the bowels by forcibly packing them back with towels for there is no extrusion of the viscera through the incision.

Spinocain has been used on patients as old as eighty years and as young as two months. We have used it on patients who have been unable to take a general anesthetic and some of these patients were practically moribund. Patients who have a high vascular tension and those with sclerosed vessels are not given ephedrin because there is little variation in blood pressure during the operation.

Dr. E. G. Martin, of Detroit, has proven to my satisfaction that barbitol is an antidote for possible novocain idiosyncrasies.

and I feel more secure when the patients receive the preliminary barbitol medication when using novocain in the spinal canal or in the tissues.

Again I wish to mention that an ephedrin solution must be given intramuscularly to obtain a prompt elevation of blood pressure. We push fluids before, during, and after operation, and we feel that we eliminate the customary vomiting which results from the inhalant anesthesia acidosis. Postoperative ileus and peritonitis, when dealt with under ether nitrous oxide, ethylene, or other forms of inhalant anesthetics, cause unpleasant experiences to follow because of the ballooning of the intestines through the incision.

Under spinal anesthesia we have the opposite effect on the intestines, and it has been our experience that fifty per cent of the postoperative ileus symptoms will become non-surgical when the patient is given a spinal injection. The abdomen flattens and the patient is able to expel flatus freely.

CONTRA-INDICATIONS

Personally we do not feel that there are any contra-indications for use of spinocain if the patient is operable. The low blood pressure fear has been eliminated, and, as was stated before, the patients who are practically moribund will withstand the anesthetic.

TECHNIC

1. Barbitol: Grains 5 the night before operation.
2. Barbitol: Grains 10 one hour before operation.
3. Morphine: Grains $1/6$ and scopolamin, grains $1/20$ th one-half hour before operation.
4. Position of patient lateral decubitus, knees flexed on abdomen.
5. Skin preparation: alcohol and five per cent tincture of iodine.
6. Spinous processes mapped out with alcohol sponge to detect curvatures of the spine.
7. Ephedrin-novocain solution with an additional 2 c.c. of one per cent novocain injected into the skin and through the spinous ligament.
8. Skin punctured with sharp blade to allow the blunt Pitkin needle free access.
9. A 20- or 22-gauge Pitkin spinal needle is introduced until a click is felt, and when a click is felt, clear spinal fluid be-

gins to drip, the spinocain solution is then injected.

10. The patient is kept in a lateral position until the height of the anesthesia is defined, and then the patient is placed on his back and the table tilted in a slight Trendelenburg position.

For operations below the umbilicus the point of entry is at the fourth lumbar interspace, and the solution is mixed or expanded twice, using 2 c.c. of the spinal fluid with each expansion.

For operations in the perineal region, make the injection at the fourth lumbar interspace and tilt the table in a 20° Trendelenburg position.

The point of entrance for gall bladder or stomach operations is at the twelfth dorsal or first lumbar, and the spinocain is expanded or mixed three times. After the anesthesia has reached its proper height a five degree Trendelenburg is used. Gall bladder operations will be facilitated by an intercostal block of the 8th, 9th, 10th and 11th intercostal nerves. This is done by injecting 2 c.c. of one per cent novocain solution at the inferior border of the ribs.

When the anesthesia is too high and the patient complains that he cannot breathe, tilt the table in marked Trendelenburg and tell him not to attempt to breathe or get excited and he will breathe naturally. The assistant who records the blood pressure readings can materially lessen the nervousness of the patient by reassuring him that he is perfectly safe.

The blood pressure readings should be checked at intervals, and experience teaches one that you can estimate the relative blood pressure by the character of the blood, the bleeding, and the general appearance of the patient. Absence of bleeding indicates a very low blood pressure and immediate measures must be taken to restore vascular tension to a point of safety.

Postoperative headache is easily controlled with some of the coal tar products.

Nausea and vomiting, when they occur, are controlled by lowering the patient's head and giving a $\frac{3}{4}$ grain dose of ephedrin (Lilly), or an ampule of the ephedrin-novocain solution.

Since spinal anesthesia blocks sensation in the field of operation, we find the absence of nausea and vomiting, which are almost ever-present after inhaled anesthesia. The suture line is protected and possible post-operative hernia and other complications are prevented.

CONCLUSIONS

Radical improvements in the technic of administration, nature of the solution used, and the definite controllable features of the anesthetic agent and blood pressure give us reasonable assurance that the use of spinal anesthesia in skilled hands for general surgery will become more universal.

Spinocain is the anesthetic of choice in any case that is operable below the costal arch because of its safety and controllability at all times. The method is commendable for surgeons because patients become entirely relaxed and postoperative complications are lessened.

Fluids pushed before and after operations overcome dehydration and prevent acidosis, which in turn lowers mortality.

In closing I wish to thank Dr. George P. Pitkin for the use of his lantern slides and his ever ready coöperation.

I wish to thank Dr. Frank Kelly, of Detroit, for his very valuable instructions, and for the unselfish manner in which he gave me the benefits of his experiences when I started to use spinocain.

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THE CAUSES OF FAILURE OF THE POLLEN TREATMENT FOR HAY FEVER

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Nearly every physician who has used pollen extracts for prophylactic treatment of hay fever, has had cases refractory to this treatment. Even as thorough and experienced allergists as Ramirez,¹ Cooke and Van der Veer,² and Rackemann³ have encountered 10 to 15 per cent failures with this method of treatment. Judging from the skepticism of patients as well as of many physicians toward this treatment, one is led to believe that this percentage of failures is by far exceeded in the practice of those who are less experienced with this treatment than the above men.

There are several reasons for this fact. It is true failures cannot always be prevented with the present state of our knowledge. Nevertheless, if we follow certain principles, the patients can be given reasonable assurance of the success of this treatment. It is the aim of this paper to outline these principles.

DIAGNOSIS

Not infrequently, merely the diagnosis, "pollen hay fever," may be the source of the failure of the treatment. How important it is to distinguish the pollen rhinitis from other forms of vasomotor rhinitis, such as the one due to foods and to inhalants other than pollens, is well illustrated by the following case:

Mr. P. A. R., 32 years old, has been suffering from hay fever for 13 years. Symptoms appeared regularly about the middle of August, a fact which pointed to ragweed sensitiveness. He had no relief from the ordinary pollen treatment, consisting of short and giant ragweed and cocklebur, which was administered as indicated by the skin tests. His history pointed to sensitiveness to plums, canteloupe, and watermelon. Skin tests done outside of the hay fever season were negative, but when done during the season, large reactions with these foods were encountered. It is likely that the pollen sensitiveness in this patient brought on a multiple sensitiveness to foods during the hay fever season.

This explains the inadequacy of the pollen treatment. In other cases aggravation of hay fever symptoms at night could distinctly be traced to multiple sensitiveness, namely, to feathers and horse hair. Simultaneous administration of these extracts in addition to the pollen treatment has relieved patients who in former years were refractory to the treatment.

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INADEQUATE CHOICE OF POLLENS

One of the most common reasons for not obtaining results is the inadequate choice of pollens. Frequently a standard form of treatment with a standard combination of pollens is used for every patient without considering the pollens to which the individual is sensitive. Negative skin tests may lead the physician not to use all the pollens which the patient requires. It is well to bear in mind that skin reactions by the scratch method do not always reflect sensitivity of the mucous membranes. It is frequently necessary to resort to intracutaneous tests to ascertain the causative pollens.

Mr. R. B., 22 years old, who has been an asthmatic for 10 years and under my observation for three years, has always had the most severe attacks in September and October. Among skin tests made with concentrated solutions of many pollens no positive reaction was obtained. However, on account of the characteristic onset of hay fever symptoms, on August 23, which were followed by asthma, he was given giant and short ragweed injections in June, July and August, 1929. During the entire season he had no symptoms whatever.

Moreover, we may not have sufficient knowledge of the hay fever flora of the vicinity and thus important hay fever producing plants may have escaped our attention. Nearly every year new varieties of pollens are being described in various localities as causing hay fever. In 1929 a thorough survey of the hay fever situation in Detroit has been conducted on which a report will be given in a subsequent paper.

INSUFFICIENT TREATMENT

If the pollen causing the patient's symptoms has been determined and prophylactic treatment instituted, there are two reasons for the failure to prevent symptoms: impotent extracts and insufficient final dosage.

Formerly, alcoholic and salt solution ex-

tracts, which lose their potency very rapidly, were used. This accounted for insufficient treatment in many instances. Since now the extracts of most commercial houses are prepared with Coca's Solution, which stabilizes the strength of the extract, this cause has been eliminated. Nevertheless, it is advisable to have fresh extracts on hand when giving the treatment. Cold storage of extracts is very essential.

In desensitizing patients sensitive to several pollens, I usually use a mixture containing all of these pollens in a percentage corresponding to the size of the skin reactions. For instance, if the patient gives a four plus intradermal reaction to short ragweed, two plus to cocklebur, and a two plus to marsh elder, the extract prepared for him will contain 50 per cent short ragweed, 25 per cent cocklebur, and 25 per cent marsh elder. A standardized treatment with the same pollens for every patient has not given such satisfactory results as has this method.

The result of the treatment is dependent on the final total maximum dosis which we are able to reach before the expected onset of the season. While in some patients, 1,000 to 2,000 pollen units may suffice, it is usually necessary to give larger amounts. In certain cases we have to go to as high as 50,000 to 100,000 units in order to obtain freedom from symptoms. These doses exceed by far the ones usually recommended by commercial houses; if given carefully, they achieve success. Of course, the greatest caution is necessary when employing concentrated extracts, in order to prevent severe reactions. To this effect, more frequent injections (25 to 50) may have to be resorted to, instead of the customary 12 to 15 dose treatment.

It is advisable to continue the treatment with the final dosis during the season by weekly injections, in order to maintain the protection afforded by this dosis, throughout the season.

CO-SEASONAL TREATMENT

If the patient is too late for the pre-seasonal treatment, he may be given the treatment during the time while the symptoms are present. This treatment consists of one or two injections a day. The doses have to be well gauged and the patient thoroughly watched, since during the season the patient is usually more sensitive to the pollens than at other times. Reactions,

therefore, may occur more frequently. It is generally admitted that this treatment is not as satisfactory as the pre-seasonal treatment.

POLLEN ASTHMA

There are many patients whose hay fever is associated with asthma. Usually toward the end of the season, as their nasal sensitization improves, the bronchial mucous membranes manifest more pronounced allergic changes. These patients are successfully treated if they complete the pollen injections before the season starts. If the injections are given while asthmatic symptoms are already present, the asthma often becomes worse. I saw several patients last year who were not relieved with the doses ordinarily recommended, but were completely free from symptoms during this season, when much larger amounts of pollen were given.

REACTIONS

A local reaction from an injection is the kind that usually causes little discomfort, although it may bring about a swelling of the arm to twice its size. The constitutional reaction may give rise to alarming symptoms. It usually occurs inside of one hour after the injection, with a severe sneezing, dry cough, shortness of breath, and the eruption of urticaria which habitually begins at the site of injection and spreads all over the body.

Investigation has disclosed four reasons for the occurrence of such a reaction. First, the injection of larger doses than the patient can tolerate, or a too sudden increase in concentration; second, the accidental introduction of the extract into the vein; third, the change to a fresher and more powerful extract; fourth, the simultaneous sensitiveness to pollens and other substances such as certain foods with which the individual has come in contact at the time of injection. The worst reaction which I have witnessed occurred in an individual who had eaten fish to which he was sensitive, just previous to the injection of ragweed. Former administrations of ragweed extract had never produced any ill effects. Reactions following intravenous injections are characterized by their immediate onset and by the fact that no local swelling on the site of reaction can be detected. An injection of 0.5 c.c. of epinephrin may ward off more serious trouble. The placing of a tourniquet about the arm above the site of the injection, and

the simultaneous administration of epinephrin in the other arm, can be successfully applied.

In order to restrict the occurrence of reactions, I have given the injections in fractional doses. For instance, the short ragweed was administered in the morning and the giant ragweed in the afternoon. Among 2,414 injections given in 1929 to 142 patients, there were only 29 constitutional reactions.

PERMANENT PROTECTION

Although a patient may become free of hay fever at any time, the protection of the pollen treatment is only seasonal and has to be repeated every year. Attempts have been made to secure a permanent protection from

hay fever by continuing the treatment throughout the year, at the rate of about one to two injections a month. It will take several years before conclusive data on this question will be available to the profession.

SUMMARY

In summarizing, I wish to emphasize my belief that failures with the pollen extract treatment for hay fever can be entirely eliminated if the correct pollen is chosen and the final maximum dosis is sufficient.

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SOME OBSERVATIONS ON ANESTHESIA IN OBSTETRICS

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Probably some apology should be made for choosing a subject about which so much has appeared in the literature and over which so much discussion has arisen. However, with the purpose in mind of reviewing the various methods at hand, some of the objections and advantages of each, and a discussion as to how much should be done to relieve the suffering of the parturient, the choice of such a subject can be justified.

The extensive investigation of the subject of anesthesia naturally turns in course of time to the field of obstetrics. The last few years have seen the elaboration and introduction of several new methods or the re-introduction of methods formerly discarded, and their use in obstetrics advocated. The amelioration of labor pains is an important field of study, and certainly a popular one with the patient, but certain limits of safety and many indications and contra-indications must be observed, or the effort to reduce pain becomes an instrument of destruction. Furthermore the indiscriminate or routine use of any one method results in failure as often as success, and methods of value fall into disuse from abuse.

Anesthesia in obstetrics has somewhat different requirements than elsewhere in medicine and it seems best to outline those requirements at the start. They are briefly as follows:

1. Maternal safety must be assured,

this being a requirement common to all anesthetics.

2. Fetal life must not be endangered or sacrificed.

3. Wide adaptability to varying conditions is desirable.

4. Labor must not be materially affected.

5. Relaxation of the perineal muscles should be obtained.

6. The anesthesia should be readily controllable.

7. The expense should be nominal.

No one of the methods in vogue at present seems to meet all of the above requirements, nor does any method completely mitigate the pains of labor and it is not probable or desirable that childbirth will ever be made absolutely painless. A comparison of the various methods in vogue with the above principles is of more than passing interest.

The accoucheur is offered a wide variety of more or less well tried methods which

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vary from analgesia to surgical anesthesia. Some methods are designed to begin fairly early when labor is fully established, others are brought into play late in the second stage, and the means of administration vary from hypodermic injection, intravenous injection, rectal instillation, injection into the sub-arachnoid space, or inhalation. Each method has its advocates, each has been extensively tried, and yet each has indications and contraindications with which all must be familiar before a final choice is made.

All comparisons between various types of anesthetics made in this paper are restricted to the conduct of normal labor. Where any one method is especially applicable an effort will be made to emphasize that point in the later discussion.

As a rule the pains during the first stage of labor are not unbearable, and it is only in the occasional patient that means must be instituted to relieve them. From the complete dilatation of the cervix to the passage of the head over the perineum the pains reach the greatest intensity. However, measures for the relief of the occasional patient during the first stage of labor must be considered.

There are several measures intended to be instituted during the first stage, the first of these being morphine-scopolamin analgesia, incorrectly called "twilight sleep" by some who recall the elaborate fanfare and newspaper campaign of 1913 and 1914 which popularized the method with the laity. Morphine sulphate in $\frac{1}{4}$ gr. doses combined with $\frac{1}{200}$ gr. of scopolamin hydrobromate was used, the scopolamin being repeated one or more times depending upon the mental condition of the patient. An elaborate technique involving darkened, sound-proof rooms to obviate the possibility of any external stimuli affecting the patient, was part of the treatment. Modifications of this are still in use today, and undoubtedly it has resulted in much good. The best its enthusiasts can claim for it is that it may shorten the first stage, but the second stage is prolonged, with a possible increase in the incidence of surgical interference. The method is not successful in all cases, many patients require mechanical restraint and there is an increased fetal mortality estimated at variable figures of from one to two per cent.

It violates the fundamental principles elaborated earlier in the paper by materially increasing the fetal mortality, it is restricted

in its adaptability being confined almost entirely to hospital practice, and requiring the constant attendance of the physician, and by prolonging labor. The increased toll of dead babies is the bar to success here, but the utter collapse of its previous popularity is the best indication of its ultimate fate as a routine measure.

Definite contra-indications to morphine-scopolamin analgesia are: idiosyncrasy to scopolamin, primary uterine atony, cephalopelvic disproportions, weak fetal heart tones. Modifications of this method can be of distinct value in the treatment of posterior positions of the occiput, or maternal exhaustion where no cephalopelvic disproportion exists.

The induction of analgesia during the first stage includes the Gwathmey method, which has also enjoyed abundant popularity recently. The method of injection of morphine and magnesium sulphate hypodermically, followed by the rectal instillation of ether, oil and quinine is so familiar that it need not be described here.

Labor has undoubtedly been freed of some of its sufferings by this method, yet its application as a routine measure to all cases has resulted in many unfortunate incidents so that now its use can only be justified in a few selected cases and there the method is frequently modified. Narcosis of the fetus, pulmonary irritation, diarrhea, and quinine reaction have followed its use. More apparatus is required than the demands of home practice permit. Once the instillation is made, the anesthesia becomes uncontrollable and the anxious attendant can only wait and hope that all will be well eventually.

A more recent development has been the use of spinal anesthesia as advocated by Pitkin, using a solution of novocain in a vehicle of heavier specific gravity than the spinal fluid. There are certain technical difficulties of making the spinal puncture and postural treatment following the injection which, unless thoroughly understood, causes many failures, and even fatalities. The duration of the anesthesia is rather short, which makes its use early in the first stage unadvisable. Labor is apt to be prolonged as the abdominal muscles lose their role in aiding expulsion. The relaxation secured will often obviate episiotomy, but for the above reasons it is not a method well adapted to general use.

Among the inhalation anesthetics we have the oldest and best known methods, as well as some of the newer attempts. Chloroform enjoys an historical prestige, of which it is justly deserving, for certainly its discovery was one of the greatest benefactions ever made to mankind. Whether or not its historical associations account for its hold upon some practitioners, especially the older men of the profession, one can hardly say. Its small bulk and rapidity of action are overshadowed by its primary and delayed toxicity. The toxemias of pregnancy constitute a distinct barrier to its use. The use of chloroform probably should not be abolished entirely from obstetrics for in certain cases such as Bandl's contraction ring, its use sometimes produces the relaxation necessary to effect delivery when other means are contra-indicated or fail.

The most recent developments have been along the type of gas inhalants. Ethylene has passed into the discard because of its explosive qualities. Until the danger of explosion can be eliminated, which cannot be assured at the present time, it must remain in spite of its otherwise excellent qualities a forbidden agent for the relief of pain.

The place of nitrous oxide-oxygen anesthesia in obstetrics is still in the debatable stage. Certainly because of the expense, the cumbersome apparatus necessary and the training essential for its proper administration, its use outside of the hospital is almost negligible. In clinic practice, few institutions have a trained anesthetist available for twenty-four hour duty in obstetrical work. The administration usually is prolonged if analgesia is attempted early, and the expense as compared with ether is of some consequence. But more than that, the relaxation which can be secured with nitrous-oxide anesthesia does not compare with that usually obtained with ether. Poor relaxation means not only an increase in the frequency of perineal lacerations with increased morbidity, but an increase in fetal accidents. Often the nitrous-oxide anesthesia, through the poor relaxation, is the only impediment to an otherwise normal, uncomplicated birth. When available, nitrous-oxide-oxygen is useful for very short anesthetics for repair of perineal or cervical lacerations. The speed with which the patient reacts and the absence of severe post-anesthetic symptoms are far more comfortable to the parturient than ether.

In the present state of medical science ether probably occupies the place of greatest adaptability, if not that of greatest safety. While its bulk is greater than chloroform, its toxicity is much less, and in the absence of existing upper respiratory infections, which should make its use contra-indicated, its sequelæ are few. For the practitioner in the home, its limits of safety are such that it can be given by an inexperienced person under the direction of the accoucheur, and yet assure the patient of mitigation of the pain and relaxation of the perineal musculature for the delivery. If the administration of ether with the pains has been started early enough only a little increase is necessary while the head is being delivered to secure complete anesthesia. The expense is certainly small. Probably ether today enjoys the most widespread popularity of all types of anesthesia at our command.

There are numerous other medicaments and procedures recommended for the alleviation of labor pains. In fact, methods are legion. The above covers the fairly well recognized procedures, and the others are usually modifications or variations.

So much for the weapons; now for the important question of how much should the obstetrician do to relieve pain? I mean no disrespect for the woman of today when I say that she bears pain poorly when compared to her sisters of bygone days. The problems of the obstetrician are complicated by the fact that the mothers and grandmothers of the present generation are loudest in their demands that something be done to relieve the laboring woman of her terrible suffering. Modern hospitals have made operative obstetrics comparatively safe. Too often because operative interference is so safe, the demands of the family so insistent, and the sympathy of the attendant aroused to the point that his judgment is overwhelmed, so much is done to relieve labor that disaster results to the baby. Following the first shock of grief, the doctor is still more stunned to find himself the target of the excoriating remarks of the persons who were most insistent that something be done.

If the anesthetic is too profound the intensity of the labor pain is so altered that labor ceases to progress. Thereupon follows an operative procedure from which the woman may eventually recover, but such practices must materially contribute to the

present excessive mortality and morbidity rates of this country. It is my opinion that the decrease in obstetric deaths from puerperal sepsis that occurred in the days of septic medicine are more than counterbalanced by the deaths which occur during the present era of asepsis due to the increased incidence of operative interference so that the maternal death rate remains at comparatively the same level that existed fifty years ago.

If operative procedures are not undertaken, the harmful effects of the anesthetic cause fetal accidents. Depression of the fetal respiratory center as a result of deep maternal narcosis is responsible for the deaths of many infants annually which might otherwise have been saved. The use of nitrous-oxide is alleged by some to change the blood in such a manner that the clotting time is altered. In case of slight intracranial hemorrhage the bleeding resulting after the use of nitrous-oxide may be fatal.

Under certain anesthetics, nitrous-oxide for instance, relaxation of the perineal muscles is definitely diminished. This results in more frequent lacerations, more episiotomies, more infections, and more accidents to the fetal skull. My plea, then, is to do less to alleviate labor pains, in the hope of avoiding accidents, of making operations less frequent, of preventing infections. I freely admit that the obstetrician is censured for not doing enough. Often the doctor who does the most to control the pains has the largest practice and incidentally the highest fetal mortality, but the censure in the opposite direction and after accidents occur should be equally as severe.

In managing labor the physician should carefully consider several cardinal principles before the final selection of a method is made. Most important is the matter of risk the patient must undergo to secure a desired result. Obviously the risk to the fetus must enter into this consideration so that the child must not be needlessly sacrificed to save the mother from pain, yet the maternal organism cannot be wholly ignored. Where an inhalation anesthetic is contra-indicated by a constitutional condition and its use would entail more risk, another method should be selected which will eliminate that danger.

One of the great curses of medicine is the habit of routine. For all their similarity no two accouchements are exactly alike, and an attempt to apply one type of anesthesia over and over again results in as many disasters as if no anesthesia at all were used. An enthusiast for rectal analgesia may be so blind to individual variations as to make his results just as unsatisfactory as the man who through indolence clings tenaciously year after year to some other method, come what may.

Let the anesthetic fit the case, not the case the anesthetic. One may still be very conservative in obstetrics, do much to relieve suffering and yet have many strings in his fiddle.

The cost of medical treatment is a popular subject of lay and professional comment at present. I want to mention the matter of expense of the anesthetic used in obstetrics only to say that it is one point wherein the doctor, by using a little consideration, can help to meet criticism. I do not suggest for a minute the use of ether, simply because it is less expensive, where its use is contra-indicated, but all other things being equal, the end-results the same, the matter of expense should be given some weight. Simply the habit of the doctor is not enough to warrant the routine use of an expensive method, where some less expensive will answer just as well.

In conclusion, the various means of ameliorating labor pains at our command are numerous and diversified, but all must meet certain requirements, or they become instruments of harm. Their application should not increase the risk of mother or child, labor should not be affected, relaxation should be obtained, and the expense of administration nominal. Greatest success will be obtained by diversity of method to fit variations as they arise; only in this way can parturition be robbed of its greatest dread, pain. My plea is that less be done to relieve this suffering than is now the popular practice in the hope of avoiding unnecessary operations and of ultimately lowering our present high death rate and morbidity in obstetrics.

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THE TREATMENT OF HAY FEVER BY ANTERIOR ETHMOIDAL INJECTION*

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The distinction between the so called seasonal and non-seasonal or allergic and non-allergic types of hay fever loses interest if our treatment is by nerve injection, for this procedure applies equally well to both. Without knowing the mechanism whereby a pollen or other allergic substance may result in the symptoms of hay fever, we do know that injection of a strategic nerve, so as to make it impervious to the passage of nerve currents, breaks a necessary link in the chain of causation and prevents the manifestation of hay fever symptoms even though the allergic substance be present in abundance. Even in those cases which show no reference to season, and of which the cause is unknown, we find that injection of the strategic nerve breaks the causal connection and prevents the manifestation of hay fever symptoms.

Asthma, however, should be carefully distinguished from hay fever. Perhaps the most constant symptom of hay fever is the excessive sneezing, though other symptoms usually present in varying combinations are weeping, engorgement of the nasal mucosa, and itching or burning of the nose and eyes. Frequently associated with hay fever are varying degrees of dyspnea, ranging all the way from a barely perceptible tightness in the chest to frank and almost unbearable asthma. To consider all of these respiratory manifestations as one and the same disease is a common error of the lay mind, sometimes even tincturing the professional viewpoint. *That they are clearly separable is shown by the fact that injection of the strategic anterior ethmoidal nerve may and usually does relieve the hay fever without affecting the asthma.* It should be noted that in cases in which the asthmatic attack is uniformly preceded by an attack of hay fever the cessation of hay fever effected by this procedure results in a cessation of the asthmatic attacks; but this does not lessen the validity of the distinction between the two affections.

HISTORY OF THE ANTERIOR ETHMOIDAL INJECTION

Nerve injection for the relief of hay fever was reported by Otto Stein† as far back

as 1908. Stein not only injected the "branches of the sphenopalatine ganglion where they emerge from the sphenopalatine foramen" but also the nasal nerve where it dips down into the nasal chamber through the cribriform plate.

In 1924 Payne reported 43 cases of hay fever treated by sphenopalatine injection, with results ranging all the way from complete relief to complete failure. The writer, having experienced a similar diversity of results from alcohol injection of the sphenopalatine ganglion, in 1927 supplemented the procedure by injection of the nasal nerve, and, without knowing of Stein's injection, partly duplicated his procedure. Even this combination, however, including injection of both sphenopalatine ganglia and both nasal nerves, although increasing the percentage of successes, nevertheless in a few cases failed to relieve the symptoms. For a time it was thought that these failures were due to faulty technic in the injection itself, and in some cases this was undoubtedly true. But at length it became apparent that failures were encountered which could not be readily dismissed as due to faulty technic. It seemed incontrovertible that there was some leak in the innervation of the nasal region not shut off by this method. Careful dissections were now made in the attempt to find this leak. In these dissections were found what I have not seen mentioned in any anatomy consulted: a number of fine nerve filaments given off in the three quarters of an inch between the point where the nerve leaves the orbit through the anterior ethmoidal foramen, and where, after passing through the ethmoid cells, it dips down through the cribriform plate into the nasal chamber. There seemed every reason to believe that these fibers constituted

*Read before the East Side Medical Society, Detroit, June 12, 1930. From the Jefferson Clinic and Diagnostic Hospital. For professional note: see April, 1930, Journal, p. 296. Just before going to press we have received word of the death of Dr. Hiram Byrd, which took place on July 20th.

†Sluder, G.: Nasal Neurology, Headaches and Eye Disorders, The C. V. Mosby Co., St. Louis, 1927.

the leak we had failed to stop, and that an injection via the orbit at the point where the nerve enters the anterior ethmoidal foramen, that is, an injection of what is called the *anterior ethmoidal nerve*, would solve the problem.

Injection into the orbit, using novocain, was not a new procedure, and indeed the injection of alcohol was not without precedent. Quoting from Forchheimer's "Therapeutics of Internal Diseases," Vol. IV, p. 353, Levy and Baudoin, "in rare cases in which injection at the supra-orbital notch (for the relief of neuralgias) does not give good results, have injected the frontal and lachrymal branches by passing a needle along the external wall of the orbit." This, however, seems to have been little more than a surgical excursion, for it is related by Howell T. Pershing with no comment except that "One naturally shrinks from invading the orbit with alcohol."

It was at first supposed that injecting the anterior ethmoidal nerve at this more proximal point would merely replace the injection of the nasal nerve and would be useful simply as a supplementary procedure to injection of the sphenopalatine ganglion for hay fever. Subsequent developments, however, disclosed that the anterior ethmoidal injection is a much more dynamic measure than was first supposed, and that in a majority of cases it alone is adequate for the control of hay fever, without recourse to the sphenopalatine injection.

APPLICATION

In practical application the following should be clearly understood: that there are six points, three on each side, where injections may be made for the relief of hay fever. These are: the anterior ethmoidal nerve, injected through the orbit; the nasal nerve, a continuation of the anterior ethmoidal, injected through the nose; and the sphenopalatine ganglion, right and left. In the order of their relative importance, as shown by the percentage of cases relieved at these various points, they are: the anterior ethmoidal nerves, the sphenopalatine ganglia, and the nasal nerves. Indeed, injection of the nasal nerve should be regarded as only a supplementary procedure and employed in cases where, after injection of the anterior ethmoidal nerve or the sphenopalatine ganglion, a residuum of disturbance in the anterior portion of the nose remains.

In any given case it is desirable to achieve the maximum relief with a minimum of injection. Experience has shown that cases are not infrequent in which, by injecting a single anterior ethmoidal nerve or a single sphenopalatine ganglion, complete relief is achieved. Had we the power of selecting the most strategic point in all cases, doubtless the percentage relieved by a single injection would be greatly increased. Our practice is to begin with the worst side and with the anterior ethmoidal injection, since that has proven to be the most dynamic of these procedures. Should the first injection not afford the desired relief, then experience must serve to indicate whether the injection missed its mark, and should be attempted again, or whether a supplementary injection at what seems to be the next most likely point is in order.

With the development of this operation it has been found that not merely allergic disturbances, but that whole group of nasal manifestations embraced under such terms as *vasomotor rhinitis*, *hyperesthetic rhinitis*, *hydroporrhea*, etc., are amenable to anterior ethmoidal injection. These affections, like hay fever, were occasionally amenable to sphenopalatine injection, but with no uniformity comparable to that now obtained.

Moreover, the therapeutic approach to these affections has been simplified, for instead of operating under twilight sleep, or general anesthesia, as was formerly done, it has been found practicable to perform the anterior ethmoidal injection, and in suitable cases the sphenopalatine injection, under local anesthesia, as an office procedure.

The pain consequent to these injections is made brief (of about a minute's duration), by the addition of 1½ per cent novocain to the 95 per cent alcohol solution. In the case of the anterior ethmoidal injection, within the first 30 seconds the pain has well nigh ceased, and the patient would not be incapacitated in the slightest from his ordinary activities were it not for a temporary swelling of the tissues about the eye. This disappears, however, within about forty-eight hours.

In a series of more than a hundred injections of the anterior ethmoidal nerve the results have been uniformly gratifying, with no untoward effects except the temporary swelling, above mentioned, which is always observed, and occasionally a little muscular soreness on rotating the eye. In only two

cases has there been any intraorbital hemorrhage observed, and in both of these it was inconsequential.

DURATION OF RELIEF

Since the first of these injections was made less than a year ago, all that can be said as to duration is what may be legiti-

minutes the dogs were killed with ether. Dogs 1 and 2 were dissected immediately and Dog 3 after 24 hours.

"In the first two experiments with the supraorbital nerve injection the solution was found in the loose areolar tissue of the orbital fossa immediately adjacent to the supraorbital nerve. The needle apparently failed to penetrate the sheath. In the third experiment the results were the same except that the solution had slightly penetrated the nerve sheath on one side.

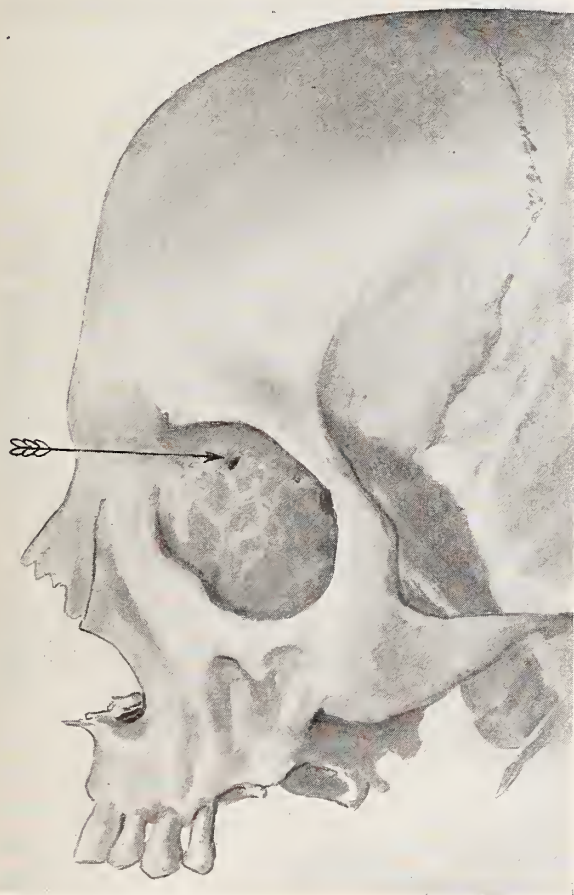


Fig. 1. Skull showing anterior ethmoidal foramen.

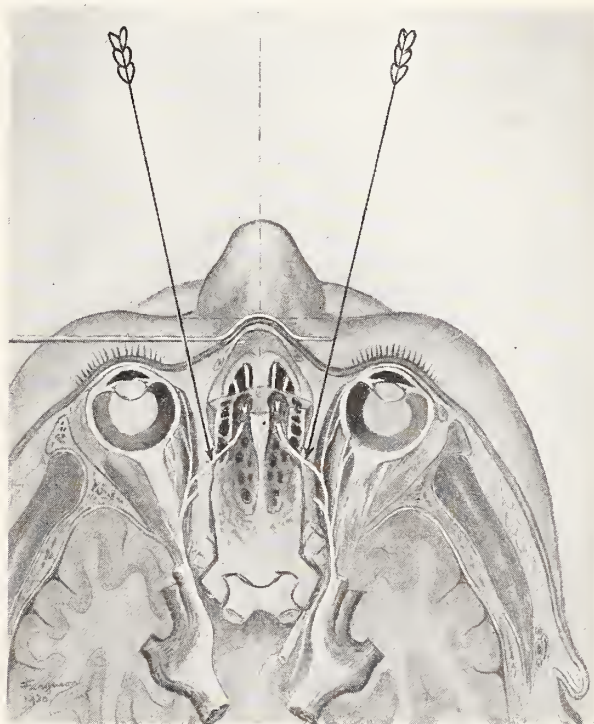


Fig. 2. Horizontal section, showing anterior ethmoidal nerve.

"In the experiments for the infraorbital nerve the injection was made after dissecting down to the nerve in one instance; in the others the injection was made through the skin. It was found that where the needle had pierced the nerve sheath the solution infiltrated for a distance of about one-half inch."*

It should be borne in mind that the difficulties of injecting such superficial nerves as the supraorbital and infraorbital in an anesthetized animal are much less than in injecting the anterior ethmoidal through the orbit in a conscious human patient. In the case of nonmedullated nerves there may be slightly more latitude for the placement of the injection, but it would appear that where a medullated nerve is to be injected with alcohol the needle must either penetrate the nerve sheath or else the placement must be accurate indeed. The necessity for accurate placement is further increased by the fact that in the orbit a minimal quantity of alcohol is to be used—in the practice of the author, $\frac{1}{4}$ c.c.—so as to confine the area of

*Sluder, G.: *Nasal Neurology, Headaches and Eye Disorders*, C. V. Mosby Co., St. Louis, 1927, pp. 137-138.

mately inferred from our present knowledge of the effects of nerve injections. It is now well established that injection of a nerve with alcohol is the equivalent of section or extirpation, and destroys its function for a period of about ten months or a year. In all probability, however, the accuracy with which the nerve is injected is an important factor. At the instance of Sluder, McMahon performed the following experiments:

"In a series of three dogs the supraorbital and infraorbital nerves were injected with 0.3 c.c. of saturated solution of methylene blue in 95 per cent alcohol and 5 per cent phenol. Under ether anesthesia the supraorbital nerve was injected at a point immediately medial to a small tubercle at the junction of the internal and middle thirds of the supraorbital ridge. The nerve was found at this point by dissection later. The infraorbital nerve was injected through the infraorbital canal. After 10

effective alcohol penetration to a very small radius. Notwithstanding these difficulties, however, by careful measurements and by the development of a sensitive touch it has proven possible to inject the anterior ethmoidal nerve with a fair degree of uniformity.

Although imperfect placement of the injection may perhaps make the relief of shorter duration than the expected year, there would seem to be other factors tending to extend the relief much beyond that period. Relief from hay fever afforded by injection of the sphenopalatine ganglion has been known to last as long as four years. Also, it is observed that cocainization of the sphenopalatine ganglion may relieve a malady indefinitely, as is sometimes the case in hay fever or asthma, and frequently the case in lumbago. Since in these sphenopalatine cases the relief lasts far beyond the known functional effect of the procedure employed, it does not seem unwarranted to predict that in many cases the relief afforded by the anterior ethmoidal injection will continue longer than a year, and in a few cases even indefinitely.

CONCLUSION

As compared with immunization methods the injection of the anterior ethmoid nerves for hay fever appears to have the following advantages: that it is as applicable after the onset as before, that it eliminates the allergic tests for the offending pollen, that it involves little loss of time for the patient and much conservation of energy for the physician, that it eliminates the unhappy reactions occasionally encountered in desensitization, that it yields a larger percentage of positive results, and finally that it is applicable to seasonal and nonseasonal types alike. The foregoing considerations would seem to make injection of the anterior ethmoidal nerves the procedure of choice in the treatment of hay fever. It is perhaps the only procedure applicable with marked success to those cases of hay fever in which desensitization fails, while well nigh the only procedure applicable with any considerable success to the other affections mentioned under such terms as *vasomotor rhinitis*, *hyperesthetic rhinitis*, and *nasal hyperorrhea*.
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PROBLEMS OF INDUSTRIAL MEDICINE

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The practice of industrial medicine and surgery probably affects a greater number of physicians in Michigan than does any other branch or specialty of the profession. Many confine their practice solely to this field. Others have one or more industrial activities for whom they render service, while practically all the major specialties, except gynecology and obstetrics, are in various ways and at different times brought into professional relation with the administration of the Workmen's Compensation Act.

Until recently, none of the medical schools gave any attention to special instruction in industrial medicine and surgery and even now one wishing to enhance his skill in this specialty must travel to various centers and learn by observation mainly in hospitals of large centers of industry and without any logical plan for development.

Our Workmen's Compensation Act became operative in 1912. In the nearly 18 years of its existence, little has been accomplished by the medical profession in organ-

izing the many doctors engaged in this work or in standardizing even the most basic principles of practice. What has been done appears to have been forced upon us by employers, insurance companies or learned in the stern school of experience.

Is it any wonder then that we find ourselves confronted with many problems and practices not to our liking? It really reflects much credit upon the profession as a whole that we are not worse beset than we are and indicates that there are, here and there, strong men of great vision who have, by their example, helped keep this branch of

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the healing art on a relatively high plane.

What might have been done by adequate organization can only be surmised; and contemplation of the past is of value only insofar as it may direct our course in the future. The provisions of the Workmen's Compensation Act in Michigan are in principle and to some extent in practice much the same as in the majority of other states so far as they affect the doctor, but I believe there is room for improvement.

For instance, I believe the membership of our Compensation Board should include a suitable number, possibly one or three, physicians, men of adequate basic training and wide practical experience, who by their counsel could bring to this board the much needed expert wisdom which it now lacks for the proper determination of such points of evidence as are, of their very nature, matters for the specially trained and experienced physician. This plan appears to work well in those states where it is in operation, namely, Ohio and elsewhere.

Again, I believe the deputy commissioners presiding at the regional hearings should be made familiar with and required to pass an examination in some of the elementary rules of evidence and procedure to the end that legal horse play and other objectionable practices would be eliminated and simple justice more often obtain, with less expenditure of time and money.

Again, I am, I think, reliably advised that as a matter of law we are, as individual physicians, violating the statutes relative to the confidential relations of patient and physician every time we send in any report, whether primary or final, regarding any case which involves a diagnosis or other statement relative to that patient's condition without his consent in writing, and might on occasion be made the subject of successful legal action for monetary damages. This regardless of the fact that the rigid observance of this technicality would defeat the intent of the Compensation Act, yet no provision has been made in the law for our exception or protection. It may be well for us to also bear in mind that, even under oath on the witness stand, we should be guarded as to our testimony because, if testifying for the employer or his insurance company, certain facts regarding the case can not, without laying ourselves liable, be brought out regarding the patient unless his legal representative has opened the subject by intro-

ducing testimony which opens the matter in the proper legal way.

These technicalities are usually understood by the lawyers on both sides but in their natural zeal to win and to introduce testimony to that end, the attorney who should protect you may carelessly lead you into making statements for which you may be held liable.

It is my hope that in the very near future we may secure the advice of some competent lawyer who would, in the form of an address before our society, tell us of our rights and limitations relative to the giving of testimony and filling out of blanks.

The matter of a uniform fee bill has received more or less comment. In Ohio, such a uniform schedule is in operation. It was prepared by the Ohio State Medical Society, accepted by their board and appears to be giving satisfaction.

It would appear to be desirable that a uniform set of blanks or forms be adopted for the doctor's use in reporting industrial injuries, both as to the preliminary report and subsequent records and reports.

The present situation is a great nuisance, as each insurance company has its own special blank and much confusion results, especially when there is a change of insurance companies without due notification being given us.

Other very important changes and corrections of practice doubtless suggest themselves to you and should be brought out by discussion.

Now I come to another class of conditions which need correction. They concern the relation between the doctor and the employer and center mainly about first aid practices.

Some employers coöperate fully in carrying out a safe and adequate first aid system, but, as you know, many of these so far overstep their legitimate boundaries that they are actually practicing medicine and surgery just as far as they dare. These present a very vexatious problem and are the source of much irritation and conflict. I believe I am safe in saying that no single factor gives rise to so much discord in the course of our work as the situations we are called upon to meet as the result of certain over-officious practices in first aid. Right here we are now reaping the results of our neglect of organization, which should long ago have forestalled this situation by taking

a constructive interest in educating the employer. He should have been shown that it is a risky and expensive thing to place the responsibility of first aid work in the unsupervised hands of even a trained nurse, not to mention the folly of trusting to anyone of lesser preparation.

In my opinion, the matter of giving medical nonsurgical advice and treatment to anyone by first aid personnel other than regular, licensed physicians is a vicious practice and should be stopped.

We also find incompetents making physical examinations of applicants for employment and their findings made the basis for acceptance or rejection. I recently had a hernia case where a so-called first aid man had examined and passed the man as sound. In a few days the employe appeared with an obvious hernia and was operated at the insurance company's expense. At operation an old hernia was diagnosed, which certainly was present before his employment. Occasionally we are able to present to our clients such concrete evidence as an object lesson and do some constructive advising.

I am well aware that many of the bad practices to which I refer are not encountered in the case of full-time surgeons working under contract with the large industrial concerns, but it is the average man with his average problems that we wish to benefit.

Doubtless in conference, we would enumerate many other things which should be different, but I have mentioned these few to emphasize some of the weaknesses of our position and to call forth from the membership of this society suggestions and plans for their solution.

With our by-laws revised, we should be

able to have appointed standing and special committees whose personnel would represent the strength and wise experience of our Society. For instance, a legislative committee which could work with or through a similar committee of the State Society might exert a great influence in securing corrective legislation. Also a committee made up of aggressive but tactful men should be able to establish a contact with our industrial commission, receiving and giving advice and together working out tentative plans for betterment of the service. I am wondering if much that we would like to see changed could not be accomplished through contact with the commission without asking for too much special legislation. Also in the State Department of Health we have a powerful and most sympathetic ally. I am sure Dr. Kiefer has the widest knowledge of many of our problems of any man in Michigan and he is always ready to help. As ex-president of this society, he surely is capable of giving us wise counsel.

As your President, I wish to thank the Michigan Society of Industrial Physicians and Surgeons for having given me a most able and efficient Board of Directors. If our actions have not always been in accord with all of your wishes and if it appears that we may have taken some liberties with the by-laws, please consider that whatever has been done, was done for what we believed was the best interest of the Society and hope results have proved the wisdom of our acts. So far as possible, I hope the new administration will see fit to continue present committees because experience has taught them much that others must learn before their efforts will reach maximum efficiency.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Commissioner
LANSING, MICHIGAN

PROGRESS REPORT

A Study of Births Survived by the Mothers

The new state-wide study of births survived by the mothers is progressing rapidly and is bringing to light some interesting facts. Up to June 1, 1930, a total of 415 cases had been studied and the results tabulated. Sixty-four per cent of these mothers who survived childbirth had prenatal care, whereas in the maternal mortality study re-

cently completed, of 1,627 deaths only 40 per cent had prenatal care and in the majority of the latter cases the care received was inadequate.

As to hospitalization, 24 per cent of the mothers who survived childbirth had hospital deliveries over 90 per cent of which were planned, the balance being emergency hospital deliveries. In the maternal mortality study only 18 per cent had hospital

care entirely, the majority having been cared for at home until the situation became serious and they were removed to hospitals, where they died.

It is of interest to note that good co-operation by the patient was reported in 46 per cent of the cases which survived. Also among the survivals serious complications were reported in 13 per cent of the cases but good prenatal care saved the lives of the mothers. Five per cent of the survivals had intercurrent diseases, not directly related to the pregnancy, and here again good prenatal care saved lives.

The type of deliveries in the two groups is compared as follows: among the survivals 8 per cent were operative deliveries while in the maternal mortality study 48 per cent were operative deliveries.

INDUSTRIAL HYGIENE

An item of considerable economic importance to industries is the problem of safely re-establishing in their service the employees who have been seriously ill or severely injured. A survey of the health work conducted by industries today discloses the fact that quite generally they are beginning to recognize the need of more definite efforts toward this end.

With but few exceptions, the industries with well organized health service are giving more attention to methods that will enable employees to return to work earlier than formerly after illness or injury, but at the same time have their health more carefully safeguarded. For this purpose, industrial physicians are now inclined or are urged by the employers to make a more careful check-up on the physical condition of such employees on their return to work. Some firms require a careful examination as to the condition of certain organs at least, if there has been an absence of three days or more on account of illness. Conditions thus discovered sometimes show the necessity or advantage of the employee being given a different kind of work when he first returns. If advisable this change of work becomes permanent. Such precautions are often of great physical importance to the employee, and of economic value to the employer and to the community. Thus, the discovery of certain diseases in their incipency may have some significance in relation to public health.

The problem of rehabilitation of the in-

jured employees is demanding more careful attention. For the permanently injured who may be disqualified for their former positions, a few large industrial corporations conduct special rehabilitation or training departments, aiming to keep in their employ, by change of position if necessary, the workers who through years of service have proven their loyalty and general capabilities, and thereby lessening to a great degree the high cost of labor turnover. Few firms are able successfully to carry on such a system of training, but the government has made provision for the care of all such cases.

The Rehabilitation Division of the Department of Public Instruction is conducting vocational rehabilitation schools and is doing splendid work in fitting injured workers to maintain efficiency in some kind of occupation and continue to be self-supporting and independent. Sometimes they are thus enabled to earn larger salaries than in their former occupations.

As the industries and the physicians interested in industrial medical and surgical service realize the assistance that the Department of Public Instruction is prepared to give their injured employees, a closer co-operative working relationship can easily be established. Physicians so concerned for injured industrial employees, wishing to learn more of the purposes and methods of the rehabilitation bureau and the part they can contribute to the government's program, should communicate with the Department of Public Instruction at Lansing, through Mr. John J. Lee, State Supervisor of Vocational Rehabilitation.

F. A. P.

LABORATORY NOTES

The Michigan Department of Health was represented at the American Medical Association scientific exhibit in Detroit, June 23-27, by Dr. N. W. Larkum, immunologist, who exhibited apparatus regularly used in the laboratory to demonstrate bacteriophage action in vitro (liquid and solid mediums); also charts showing methods of preparation and standardization. Charts showing bacteria susceptible to lysis and agglutination following inoculations of lysed typhoid bacilli were also displayed.

Dr. Larkum has only recently returned from Baltimore, where he was studying tissue cultures with Drs. Warren and Mar-

garet Lewis. He returned by way of Saranac Lake, where he gave a talk on bacteriophage before the Trudeau school.

Four fellows of the Rockefeller Foundation have been assigned to the Bureau of Laboratories, Michigan Department of Health, for the summer to study laboratory methods. They are as follows:

Dr. Luang Siribaed Bisuddhi, in charge of the bacteriological laboratory, Department of Public Health, Bangkok, Siam.

Dr. Yung-Tsung Yao, Technical Expert and Acting Chief of First Division, Department of Health and Sanitation, Ministry of Health, China.

Miss Dora E. Snyder, Assistant Bacteriologist, Missouri State Board of Health Laboratories.

Dr. Luigi Gabbano, Assistant in the Institute of Hygiene, Royal University of Genoa, Italy.

Dr. N. W. Larkum, Bureau of Laboratories, was placed on the staff of the Sparrow Hospital, Lansing, as bacteriologist, about May 15, 1930.

CHILD HYGIENE NOTES

Dr. Ida Alexander has just completed a study of 122 births survived by mothers in the Upper Peninsula which is part of the state-wide survey.

Miss Julia Clock is completing a breast feeding survey in Luce county and will go from there to Ontonagon county.

Miss Bertha Cooper is completing Child Care classes in Tuscola county, having had 439 enrolled in her classes. From there she will go to Presque Isle county, where she will conduct a breast feeding survey.

Miss Martha Giltner, who is doing prenatal nursing in Alpena county, has now

under her observation 151 prospective mothers. This work is being done under the supervision of the local doctors.

Miss Esther Nash and Miss Charlotte Ludington are completing a diphtheria immunization program in St. Clair county, sponsored by the County Medical Society with the immunization done by local physicians.

ENGINEERING NEWS NOTES

On June 23 our resort inspectors will again swing into action. It is planned to cover the entire state, visiting Amusement Parks, Clubs, Community Camps, Girl Scout Camps, Camp Fire Girls Camps, Boy Scout Camps, Welfare Camps, Hotels, Profit Camps, Tourist Camps, Y. M. C. A. Camps, Y. W. C. A. Camps and State Parks.

Five men are charged with the inspection of water supplies, sewage disposal, garbage disposal, camp sites, food handling, and bathing facilities, while two men under the direction of the Department of Agriculture are charged with the inspection of resort milk supplies. In 1929 the inspection of milk supplies was handled by the regular resort inspectors and did not prove satisfactory. The present plan keeps the work under the supervision of the department authorized by law to do this work. These milk inspectors are technically trained and have had much experience in this type of work so that the resort milk supply problem should be well handled.

The ratings for camps and resorts will be on the same basis as last year. These ratings will be mailed out about two weeks after the inspections, thus giving the resorts the immediate results of our work. We have received a large response from our 1929 ratings. From this and other sources we are expecting to find a decided improvement in camp and resort sanitation during our 1930 inspections.

PAST PRESIDENTS' DINNER TO THE OFFICERS, TRUSTEES
AND DELEGATES OF THE AMERICAN MEDICAL
ASSOCIATION

given by

THE MICHIGAN STATE MEDICAL SOCIETY

June 23, 1930

Detroit Yacht Club, Detroit

The Michigan State Medical Society, through its Officers and Council, complimented the Officers, Trustees and Delegates of the American Medical Association with a Past Presidents' Dinner at the Detroit Yacht Club during the Eighty-First Annual Session in Detroit, on June 23, 1930.

Dr. J. D. Brook (President, Michigan State Medical Society): Fellows of the American Medical Association: One year ago at Portland, we, as delegates from Michigan, asked you to come to Detroit. We think that you voted wisely in doing so.

At that time we told you about dynamic Detroit, about its industries, its wonderful boulevards, its parks, and its only Belle Isle in the country. We told you that we would provide you with proper accommodations, that we could house the entire meeting under one roof at the Masonic Temple, including the sections, the scientific exhibit, the commercial exhibits, and all. We told you that Windsor was but five minutes across the river by ferry or the Ambassador Bridge. We would bring Windsor to Detroit, but that being impossible, we did the next best thing and brought you to Detroit.

A considerable number of distinguished members of the American Medical Association have at some time or other come in contact with Michigan. Some of them were born here, some of them received their medical education here and returned to their respective homes to practice their profession; others came here to receive their medical education and remained here to practice.

Among this latter group is a man who in 1880 began the practice of his profession in Detroit. You will notice that in doing so, he celebrates this year the fiftieth anniversary of his practice in this city. Not only is that a great achievement, but greater still is the fact that he has maintained during all this time the very highest standards of medical conduct. Gentle, quiet, unassuming, yet courageous and forceful if necessary, he has endeared himself to the entire profession of Detroit, not only, but the entire state of Michigan, so much so that he is known

throughout the state at the present time as the dean of internists in Michigan.

I therefore have very great pleasure and honor to present to you as our Toastmaster this evening, this kindly gentleman, Dr. Charles Goodwin Jennings, of Detroit. (Applause)

Dr. Charles G. Jennings: I thank you Mr. President and Fellows of the American Medical Association, for your kindly greeting. It is always delightful to hear these flattering things said, even if we are not quite certain that they all may be true.

It is a great pleasure for me to acknowledge that I have been practicing fifty years. That is a long time. It makes me almost as old as Dr. Billings and some of these other gentlemen, but my field of labor has been delightful, Michigan has been very kind to me, and Detroit kinder.

Since the American Medical Association became a delegate body, I have had an ambition that never has been realized. Once I almost saw through the bars that have kept me from it. I feel tonight just about like Will Rogers—so this is the House of Delegates of the American Medical Association. I almost was introduced to them once. Having this ambition, and being in Washington two or three years ago at the Washington meeting, our dear friend Gerry Morgan thought that I should be a member of the House of Delegates. I told him that I never, never could be elected as a delegate. Every time I came up, Hornbogen or Moll or Brook or Angus McLean or some fellow beat me out, so I never have had this ambition filled. At Washington I thought I would go into the House of Delegates and see what it was like, see if I really wanted to become a member of the House of Delegates. I got in and was just looking the company over, thinking that I was perhaps somewhere that I shouldn't be, when, with a rap, Speaker Warnshuis said: "The House of Delegates will go into executive session," and I was fired.

That was my only experience, except this very charming one, with the House of Dele-

gates of the American Medical Association.

We have a delightful task tonight, one that will bring back many memories, and one that will enable the Delegates and Fellows once again in a remarkable group to see their various presiding officers. I think this is the first time in the history of the organization that an entertainment of this character has been given that has brought together all, or nearly all, of the Past Presidents of the Association. So this is an occasion of unusual character.

I am going to take advantage of my prerogative as Chairman for the moment to submit a question to you, without motion and without a second. I would ask you to vote upon a motion to ask Dr. Warnshuis to send a telegram to Dr. William Williams Keen, the dean of the Past Presidents of the American Medical Association. (Applause)

Dr. Keen, unfortunately, has reached a time of life that only Past Presidents of the American Medical Association seem to have reached from that very fact—a serenity of mind that permits a great longevity. Dr. Keen is ill, and I would ask you to vote “aye” to this resolution. All who are in favor of it signify by saying the usual sign. The motion is unanimously carried.

Dr. Warnshuis, will you carry out the wishes of the meeting.

Next—not in chronological order—we have a telegram from one of our older Past Presidents.

“Dr. Warnshuis: Greatly regret that engagements prevent acceptance of kind invitation to dinner June 23, and that I shall be unable to attend meeting of A. M. A. in Detroit. Am keenly disappointed to miss such an important and interesting occasion. Best regards and best wishes to yourself and my colleagues. William H. Welch.” (Applause)

Dr. Warnshuis has advised me (I would not have the temerity to do it myself) that the wonderful experiences of the Past Presidents of the American Medical Association and their length would be such that it would not be wise to have them make half-hour speeches, and so I had nothing to do with it, don't lay it on me. He says that these little remarks will be limited to three minutes. The Chairman will hold you down—possibly, not that we can hold Billings down, or some of these other talkers. We don't want to hold Haggard down, for example. But we will have to begin.

The first of these distinguished men whom we have honored in the past it is difficult to introduce, as it is all of these illustrious men, to a body who knows every one of them, but I am not introducing them; I am presenting them.

FRANK BILLINGS, M.D.

In 1903, the Association elected one of the most distinguished of the citizens of the United States. From the time that he became a member of the American Medical Association he has been the wheel-horse. To use an automobile expression, he has been the gas tank and the oiling system and the chassis and the wheels, in other words the whole works.

I don't know what he thinks is the greatest achievement of his life, but I do know that medical men and the medical men of the future will look upon his clear-cut clinical demonstration of the influence of focal infection upon chronic disease as one of the outstanding demonstrations of the generation, and I feel, from my own experience, free to predict that this demonstration will, when the time comes to tell us of the etiology of the degenerative diseases, particularly the cardiovascular system, stand out as one of the prime factors in this devastating pathological condition.

I take pleasure in presenting to you the most distinguished ex-President of the American Medical Association, Dr. Frank Billings, of Chicago. (Applause)

Dr. Frank Billings: Mr. Chairman, Fellow-Members of the Association: From what the Chairman has said I ought to be so emotional that I can't talk, but it hasn't had any effect of that kind on me. When Dr. Warnshuis wrote to me and said I was expected to speak tonight, he was kind enough to say each speaker would be limited to ten minutes, not three. Am I right?

Dr. Jennings: There was a revision of that, Dr. Billings.

Dr. Billings: And that I was to speak upon that fact or thing which most influenced my life. Well, that is a good subject and an easy one, for of course it means that thing that most influenced my professional life.

In 1878, Dr. Christian Pfenger, a Dane, came to Chicago from Egypt. It was my good fortune to fall under his influence not long after he came, and I was his interne in the County Hospital for nearly two years. During that period of time, Christian Pfen-

ger awakened in me (and a good many other men, too) a quality of curiosity, of dissatisfaction with what I knew, and a desire to get more. I was poor as a church mouse, I couldn't go abroad because of financial defects, but I made up my mind I was going to do it anyway. When I went abroad in 1885, borrowing, not stealing, getting enough money to send me over, he said: "I want you to study morbid anatomy while you are there. I want you to study the patient at the bedside." And so for over a year in Vienna I was under the influence of Professors Sayman, Pountoff, and Kolisko in the pathological institute, every day, Sunday included, until they said, "You know morbid anatomy." Every day, during the day, I was working in Maumbrecker's clinic with that splendid man von Orden, and then following the dead to the deadhouse.

Pfenger imbued me with that, and if I have ever done anything in this medical world, it was through Christian Pfenger, who taught me never to be satisfied with any present day's work, and who sent me over to Vienna where I learned enough of morbid anatomy and of clinical bedside work to make a foundation for what I have attempted to do since.

I am sorry that the present tendency of modern medicine has forgotten how to examine patients physically. It is a mechanistic age. Talk about the cost of medical care. If every man who comes in contact with patients (I mean every practitioner) was resourceful, qualified, he would make a diagnosis with the things that heaven has given him, without any instrumental aid beyond the simple things that every man can control, in 85 per cent of all the cases. (Applause)

I am not going to say any more or take up any more time. Dr. Warnshuis asked me what thing had influenced my life. If it hadn't been for Christian Pfenger, I probably would have been satisfied to sit down, because I didn't have any money, and be much more mediocre than I am. (Applause)

Dr. Jennings: In 1906, the Association elected as its President a comparatively young man, but a young man who had presented to the profession the evidence of such remarkable surgical work that the American Medical Association could not help but recognize this man as one of the outstanding and the most promising of the members of the American Medical Association.

Modern medicine and the practice of modern medicine since his advent to it has been changed, and we can very frankly say that to this gentleman is due to a large degree the remarkable advances that have been made in coöperative medicine and surgery.

WILLIAM J. MAYO

I therefore have the pleasure to present to you the most distinguished Past President of the American Medical Association, Dr. William J. Mayo, of Rochester. (Applause)

Dr. William J. Mayo: Mr. Toastmaster, Members of the American Medical Association: I have many reasons to love Michigan. It is in Michigan that I got my education about forty years ago at the University. I learned to know something of Detroit at that time. I am grateful.

I bring you a message from the oldest member of the American Medical Association who has been its President, Dr. Keen. At the meeting of the American Surgical Association in Philadelphia some two weeks ago, I went to call upon him, found him confined to his chair, but so enthusiastic about the honor that was to be conferred upon the Past Presidents of the American Medical Association that he asked me to bring to the Association his love, and to tell you that it was the greatest event of his life when he was made President of this Association—and also I might say of mine. He said to tell you that he had grandsons coming up in medicine, and he hoped that the line of the Keens would continue in medicine as long as there was organized medicine. Therefore I was glad to hear this resolution brought up that we would send to him our love and regret that he was not able to attend.

Now I think of my three minutes, and at least two are gone.

What was the thing that made the greatest impression upon me? When I was a boy about ten years old, and Charlie is four years younger than I, my father, a country pioneer physician and surgeon, went on to New York, and came back after some three months. We met him at the station, and as we went home, he stopped at the office, which had been closed up during his absence. He brought home with him a little microscope about 10 or 12 inches high. After distributing a few presents, he said to my mother: "I saw in New York a microscope

made in Germany, and I would like so much if I could have one like that. But I have spent all the money." He was one of those that kept no books to speak of, so there was always that chronic shortage of money. He got out this prospectus and showed it to my mother. I stood there on one side of him, and my brother on the other, and he told about the wonders that could be seen with this microscope, but that he would have to put a mortgage on the house for \$600 to get it. You can imagine what an impression that made upon my brother and myself—that mortgage. It was right where the clinic now stands. My mother looked at the little family and finally she said: "It is our duty to do the best we can for the people, and we will put the mortgage on." It was ten years before all of that mortgage came off.

We understood then that what could be seen would be the truth, that we could see things in that little microscope and then compare them with that better one, which is one of the prized things in our clinic today. It was a Zeiss, made at Jena, a good microscope yet. We could see that there was an opportunity to investigate. It brought out the idea that the mind, the intelligence of man, is a visual brain, that what you hear is largely gossip, what you smell isn't always pleasant, and what you taste may be perverted. But after all, you can get certain things that you can reach with your hands, but the progress of medicine has been visual because our brain is visual. (Applause)

Dr. Jennings: Younger in years, but from my observation a little bit the senior in some of the things that probably he would not wish to tell us, the close associate of his distinguished brother, carrying on in the same line and with the same degree of excellence, the junior member of the great organization in Minnesota has brought knowledge and wisdom to the medical profession of the world. I therefore have the honor to present to you the most distinguished ex-President of the American Medical Association, Dr. Charles H. Mayo. (Applause)

CHARLES MAYO

Dr. Charles H. Mayo: Mr. Toastmaster and Friends: I too am very much pleased to be here and to see the other Presidents. They are all looking exceedingly well, they all have good appetites, as I witnessed tonight.

It was a nice thing to mention to us what we were to talk about, especially the number of minutes.

In the old days elections were marvelous things. They have just got through passing the tariff bill, but that wasn't in it when I was made a President by the old method. I remember it very well. There was more excitement because it was all crowded into a few days, but the results were very fine and I appreciate it very much.

What influenced my life most I would say was travel, travel that takes a man out where he can meet people and see their activities, see the work of the great men of the world, hear them speak, see them in action. There is nothing that fills one's mind with the new problems and stimulates activity in putting them into use as does travel. (Applause)

Dr. Jennings: We have been presenting the great West. Now I have the pleasure of presenting the great East, and the past President whom I will present, besides being a great physician, is something else. We have had one physician—Dr. Billings is a physician, but it isn't very often we have had a physician. Physicians don't seem to go, some way or other. It is the surgeons that have the court. But we have a physician to present at this time, distinguished in his department of medicine. You all know this, but perhaps you do not know that he has other qualities that mark him as a distinguished man. He is a naturalist of high order. He shoots and he fishes; he hunts and he does all of those things that become a real he-man. As a naturalist he has contributed one of the most important observations in animal life that we know of. He discovered the doiley bear, described him, illustrated him, and passed him down to natural history.

ALEXANDER LAMBERT

I have the pleasure of presenting the most distinguished ex-President of the American Medical Association, Dr. Alexander Lambert, of New York. (Applause)

Dr. Alexander Lambert: Mr. Chairman and Gentlemen: I do not like to criticize my distinguished Toastmaster, but he has slipped a cog and put me out of order. Following the line that my predecessors have taken, I shall tell the one thing that had most influence in the deciding of my medical career.

It is, of course, a great pleasure to receive

a medal as beautiful as this one about to be given us simply for staying alive long enough to acquire it.

The fact that I became a physician I think is probably due to Mendel's law, which I had no control over. My grandfather has had eight Lambert descendents, and five of them have been physicians, I one among them. When I graduated at Yale from the academic department, my father told me at that time, forty-five years ago, that by the time I was in active practice, chemistry would be one of the most influential things in medicine in its development and in its effect upon the discoveries of the human body. He said, therefore, that I had to go through the scientific school in a special course of chemistry under Professor Chittenden. I did so. I met a man there who was an inspiration and had been an inspiration to all his students, and whose inspiration that he gave me has lasted through my life and created a desire for scientific study and a desire for and pleasure in scientific work.

I went, as my father wished me to do, through Bellevue, as he and my brother Sam had done before me. Then I went abroad. When I came back I started to practice. I went up to see Professor Chittenden, and he offered to me the position as his first assistant in physiologic chemistry in the Sheffield Scientific School. It was one of the greatest honors that I have ever had offered me, and I had to make that decision myself. I refused it, because I said: "I am not of the type of college person who should live his life in that way. I belong in the world and I am of the world." I decided then and there that I would go out into the work of active practice of medicine and of bedside teaching, and that decision that I made I think influenced me more than anything else. It would have meant that I would have given my life to physiologic chemistry full time and would entirely have modified my existence.

That fulfills the desire that Dr. Warnshuis expressed, that I tell the strongest influence of my life, which was that of my father, kindly, just, but a very positive man, one of the few men that I have ever seen live who lived and died without an enemy, and to have been a companion of that man, to have absorbed his medical wisdom, has had a greater influence on my life, I think than any other one fact. (Applause)

Dr. Jennings: The Chairman in his hurry to get East got his wires crossed on his chronological order, and another product of the great West should have preceded the East. It is unnecessary to introduce to such an audience a gentleman who has filled such a place in American medicine. As Chairman of the Council on Medical Education for many years, he brought the standards of American medical education to a point at which it is not surpassed by that of any other country. He is equally distinguished as a great surgeon, and I have pleasure in presenting the most distinguished Past President of the American Medical Association, Dr. Arthur Dean Bevan, of Chicago. (Applause)

ARTHUR DEAN BEVAN

Dr. Arthur Dean Bevan: Mr. Toastmaster and Fellows of the American Medical Association: I have been a member of the American Medical Association for thirty-two years, I think. I have always been very proud of my membership. I have been proud of the accomplishments of the Association. I came into the Association shortly before its reorganization, and in 1902 at the Saratoga meeting, I think it was, I was made Chairman of the old Committee on Medical Education, by Dr. John Wyeth, who was then President. There presented itself to this Committee a great opportunity, because for the first time in the history of American medicine we had a strong, democratic, representative, well organized profession and Association.

We were fortunate in having some very clearheaded men on that Committee, and they felt unanimously that the one thing to do was to make a permanent sort of committee, that the old scheme of bringing in simply a year's report on medical education was of no value, that we should make the tenure of office longer, that we needed a permanent secretary. We brought in a report to that effect. The House of Delegates approved in a general way our report, but did not find it possible to furnish us with the necessary money which we thought we had to have to make the work function.

Fortunately, the next year Dr. Billings, who was then President, reappointed the Committee, or very much the same Committee, and we brought in the conception of the formation of a Council on Medical Education.

I want to tell Dr. Warnshuis that my

being on that Council, my continuing on that Council for some twenty-eight years has been the most controlling influence in my medical life. You all know the results of that work. I do not speak of it from an individual standpoint; I speak of it to emphasize particularly the fact that we have a great, powerful organization for good, that we still have great problems before us, quite as great as the problem which seemed to us to be the greatest problem, and that was medical education, because you all know that the American Medical Association was founded for the purpose of elevating the standards of medical education.

We have done wonderful work; we are doing wonderful work, but there are many great problems which still confront us and which we must meet, and I desire to speak of one of these tonight. That problem is this: What is all the work ultimately for that we have been doing in medicine, in medical education? It is for the purpose of bringing to the people of this country the great benefits of modern scientific medicine. More and more this is becoming clearly the one great problem of organized medicine, and today the one great problem of organized medicine is to bring to every man, woman and child in the United States the great benefits of modern preventive and curative medicine.

How is this to be done? It is to be done exactly as we work on the problem of medical education. It is to be done exactly as we have worked on the problem of pharmacy and chemistry. It is to be done by the organized profession with a well thought out plan.

The first thing that should be done in this plan is to develop in the Association a Council on Medical Service. This Council on Medical Service should be developed a good deal on the lines of the present Council on Pharmacy and Chemistry. It should be under the control, probably best, of the Board of Trustees. It should be a fairly large body, probably from fifteen to twenty-one men, well representing the different sections of the country. That Council would have a large job before it, but the first thing it must do is to organize and study this great problem of medical service.

We are confronted by that problem every day. We don't want to act hurriedly; we want to organize this Council and have this Council study this problem very carefully. I think they should do as the Council on Ed-

ucation did, have yearly conferences to which will be invited men representative of the public, because this problem is one which must be done in partnership with the public, with the people of this country.

How long will it take to do this? It will be a continuing process.

What will be accomplished? An enormous amount. We should take the initiative, as the British Medical Association have recently taken the initiative in this same problem, as was pointed out by Dr. Harris in his presidential speech today. We must take the initiative. The medical profession is the one body of men who are competent to take the initiative in this movement, and it will be best for the public and best for the medical profession if we do take that initiative. I don't know any more important problem that confronts the profession today than this problem, and I hope you will all get back of it heart and soul.

I would like to say that I think the time has arrived when we should secure, as soon as possible, a Secretary of Health in the President's Cabinet. I think that the time has come when we should do everything in our power to enlarge and expand and strengthen the present Public Health Service, and I believe with such a well organized profession as we have, a well thought out plan will accomplish an enormous amount of good for the people of this country.

The possibilities of modern medicine are so great, they are so necessary, they are so indispensable to human welfare, that every individual in this country is entitled to their great benefits. (Applause)

Dr. Jennings: It is only occasionally that a member of the medical profession becomes great in other than his first chosen field. The American Medical Association elected in 1921 a President who was destined to become one of the most important individuals in the civil life of our country. As Postmaster General, as Secretary of the Interior, as Chairman of the National Committee of the Grand Old Party, he has become a nation-wide known character, and I have the great honor to present to you Dr. Hubert Work, the most distinguished ex-President of the American Medical Association. (Applause)

HUBERT WORK

Dr. Hubert Work: Mr. Toastmaster, Fellow Once-Wuzzers, meaning ex-Presidents, Fellows of the American Medical As-

sociation: When I received the letter from Dr. Warnshuis I didn't quite interpret it. I first feared he wanted me to describe the event that influenced my life the most. I knew well if I did that it would sound to you who know me best as a confession.

Dr. Billings, as usual, has set the pace and relieved me from that embarrassed state of mind in which I came, but if I should say what has influenced my medical life the most, I should unhesitatingly say the American Medical Association. For more than thirty years I have been a member of this Association, and many of you well know that during that time I was honored with almost every position within the gift of the Association, first for many years as a delegate from my own state to the House of Delegates, then for five years a member of the distinguished Judicial Council, the first Council that was formed, of which Alexander Lambert was the Chairman. Later I was elected the first Speaker of the House of Delegates and served four years. That preceded my election to the presidency of the Association.

There are a good many accidents occurring in this life. Perhaps that is a sequence of them, but I profited by it more than anything that has occurred in my life in the practice of medicine.

Some of you may know that for the last nine years I occupied a semi-detached position from the American Medical Association. Yet I will promise you that the experience I had in the House of Delegates and as its Speaker and in the offices which I held, was of more service to me in subsequent work than any other experience in my life could have been.

The crux of the practice of medicine, of course, is diagnosis, the ability to see between. Practically the crux of all important positions, as far as I have seen, in public life has been diagnosis, the ability to see between. The knowledge that a physician gathers from association with other physicians and in association with his patients would stand him in very good stead in whatsoever position he may be called to occupy.

There is nothing more I should say. My time is exhausted, but I thank you cordially for the honor, after such a long absence, of being at home again and meeting with all of you. (Applause)

Dr. Jennings: In 1922, the Association elected as its President one of the most courtly gentlemen of its body. In his clien-

tele are presidents and princes, duchesses and dowagers, and his delightful personality has charmed all of us.

GEORGE E. DE SCHWEINITZ

I present with great pleasure, Dr. George E. de Schweinitz, of Philadelphia, the most distinguished Past President of the American Medical Association. (Applause)

Dr. George E. de Schweinitz: Mr. Toastmaster, Mr. President, Fellows of the American Medical Association, Ladies and Gentlemen: It was Emerson, I think, who said when asked what had controlled the success of his extraordinary life, "Because I had a friend."

Now we have been asked to tell what has been a controlling influence in our lives, professional and otherwise, it may be, and I think I have no hesitancy in say that whatever good I may have accomplished, whatever properness of career I may have pursued, was due to the fact that I had a friend, and my friend, as I imagine Dr. Mayo's friend was, was my father.

When I went to the University of Pennsylvania, quite young, I was not yet nineteen—and they caught them young in those days and sent them out, my father went to the train with me, and after some perfectly natural advice which I shall omit, said: "I exact only one promise from you, and that is that you shall remember that you were born of respectable people." With that ringing in my ears, I went to the University of Pennsylvania and had the singular good fortune of being in receipt of my medical education during the period of time when the so-called famous faculty of the 80's were active, the elder Pepper, Stilley, Agnew, Ashurst, Goodell, Wood, Durring, Harrison Allen, Tyson, an unusual congregation of men, and I did not forget that I had been born of respectable people. I would have been most disrespectful if I had not embraced those unusual opportunities afforded then by the School of Medicine of the University of Pennsylvania.

Now, gentlemen, it is an interesting thing to observe, once before referred to tonight, that among the Presidents of this Association, a few, one, has reached very senior years, several others considerable seniority of years, still others of a somewhat younger generation, and the hope has been handed out that there is something—longevity has been mentioned—that we get by being Past Presidents. It may be so, and perhaps it

really is true that if we carry on as I think all of us are endeavoring to carry on because of the opportunities we have had, perhaps time will stop shaking her restless glass and not another golden sand let fall to mark the passing of the hours.

And so I hope it may be with you and all of us, and that all of us may so carry on, so plan our tables of organization, so endeavor to achieve, that we shall not shame the day. And I don't speak of your day or of my day, but the day of organized medicine, of which we are all a very small but none the less active, integral part, and that we can never allow to shame the day, and we never will. (Applause)

Dr. Jennings: Another Past President of the American Medical Association has attained an illustrious career in political life. Dr. Wilbur, a great educator, became in the present administration the Secretary of the Interior. Dr. Wilbur expected to be here tonight. At the last moment he sends a letter of regret to Dr. Warnshuis:

"Dear Dr. Warnshuis: Just when I thought I had everything well arranged to get away for Detroit, there has been the usual struggle and delay in Congress, so that I find myself absolutely tied up. Three different measures which are of the most urgent concern are at their most vital point right now, so that I cannot leave Washington.

"You have no idea how deeply I regret this. I have been looking forward to the pleasures of attending that dinner given to the ex-Presidents. All I can say is that duties of the Government must take precedence when one has entered the public service.

"With kindest personal wishes and deepest regrets,

"Faithfully yours,

"(Signed) Ray Lyman Wilbur."

(Applause)

While surgeons and surgical specialists seem to be the particular failing of the American Medical Association, we have an occasional medical man, an occasional medical specialist. One of them whom you have honored as your President has attained the highest rank in his chosen special department. He has been one of the outstanding administrators and counselors of the American Medical Association, and I suppose the old thing couldn't run unless this gentleman were at hand to give his advice and counsel.

WILLIAM ALLEN PUSEY

I have great pleasure in presenting to you Dr. William Allen Pusey, the most distinguished Past President of the American Medical Association. (Applause)

Dr. William Allen Pusey: Mr. Chairman, I first thank you for your introduction, which in my modesty I admit is not deserved, but the first thing I shall do after I get home will be to tell my wife that in the presence of thirty-two ex-presidents of the American Medical Association I was thus introduced.

In the first place, I am very much surprised about the turn which this thing has taken. You gave us a delightful topic for the speakers, but not for the audience, and I suppose these old fellows would have talked and talked and talked until you were in the attitude of mind of the negro they wanted to get into a lion's cage in one of their stunts in the circus. They offered him money, they offered him everything else. Finally they made the final offer and said: "Why, the lion's an old lion and he's got no teeth."

"It don't make no difference. I'd rather be chewed up quick by a young lion than gummed to death by an old one." (Laughter)

I thought when you got to me you would be gummed to death, but these snappy boys of the past in the lyrical turn the speeches have taken, have created quite a different situation.

When I thought about the most important event that influenced my life, I thought, of course, what the rest of you did—about getting married. But I felt about that like the episode of the mule in our family at the County Fair when I was a boy. There had been a mule race for a number of years, and one year Ed Durham said to Father, "That mule Abe runs pretty good, and I would like to put him in the mule race."

Father said all right. They took Abe out of the plow where he had been plowing for a week, curried him up and gave him a day or two, and ran him in the race. He ran like a scared rabbit and won the race. So year after year this mule won the race. I still have a copy of the prospectus of the Fair: "Mule Race, first prize \$15, second prize \$5, third prize \$3. Pusey's mule barred."

This situation of not speaking of our

wives in this incident reminds me of that mule race.

Of those incidents I am willing to tell, the one that influenced me most was this. I went to college, liking mathematics and hating the literary thing. I always had the faculty of learning quickly and getting it out of the way so I would get rid of the examinations. I made up my mind I would be a civil engineer. My third year I had gotten to feeling my oats, and I went out for the scholarship in mathematics. It was worth \$100, a pretty big capital. I didn't get the scholarship in mathematics, but I got it in Greek. The next year, my senior year, I still felt that I was going to be an engineer and that my genius lay in the direction of mathematics, and I went out for the fellowship, \$500 and a room the next year, in physics. I didn't get the fellowship in physics, but I got the fellowship in history.

I made up my mind I didn't know what I was good for after that, and as my father wanted me to be a doctor and I always did what he wanted in the end, I became a doctor.

I have often thought about that. In fact, one of the great surgeons of this country, one night, drunk, was driving out a few miles from a little city where he lived, and his horse wandered off the pavement into a ditch, and this great surgeon dropped over onto the grass. He pulled himself together, felt all over, and said, "My God! if I had been killed what would the great Northwest have done?"

I do know the saying that has impressed me most, and that occurred in connection with my grandfather on the day when he was 90 years old. It happened to be Christmas day. I went to see him, and we made quite a to-do of the occasion. In the afternoon after a good dinner, he and I were sitting on the side porch, a nice balmy winter day in Kentucky. He had on his overcoat and I had on mine. I referred to a man in the community who was a notorious old shaver and a skin-flint, and I said, "John Smith is getting very deaf."

He said, "Yes. If he was deaf, dumb and blind it wouldn't make any difference."

Nothing was said then for a few minutes. Then the old man remarked, apropos of nothing: "I'll tell you, son, the man who lives for himself alone lives for a damned scurvy fellow." (Laughter and applause)

I don't say that I have lived up to that

maxim, but I give it to you as a good one. (Applause)

Dr. Jennings: The Great West, the Pacific Coast, the effete East, all have been honored. In 1925, the Association turned to the genial and lovely South for its representative. It chose one of the most distinguished of the Southern gentlemen, a man with a most cordial and delightful personality, and who has the ability to tell stories which perhaps we had better censor, but he always tells them so delightfully that we forgive him.

WILLIAM D. HAGGARD

It is my pleasure to present to you Dr. William D. Haggard, the most distinguished Past President of the American Medical Association. (Applause)

Dr. William D. Haggard: Mr. Toastmaster and Friends: It is very delightful of you to indulge us in this way. I don't suppose there could be anything in our profession more to be prized than the office that you are honoring tonight. It seems to me, though, that inasmuch as anticipation is better than realization, I wish it were possible to do it all over again, and instead of being a has-been, many of us, especially myself, would like still to have the alluring glory in the ascendancy rather than in the past. In fact, I feel tonight that I am on the wrong side.

A little boy's grandmother came to visit him. She had never been there before, and in order to impress him with her importance, she said, "Johnny, I think you ought to know that I am your grandmother on your father's side."

He said, "Granny, you won't be here more than three or four days before darned if you don't find out you're on the wrong side." (Laughter)

When I was a lad, my father taught obstetrics in Vanderbilt University, and it was my pleasure to drive with him and hold the horse when he went in to lecture. Sometimes I would creep inside, and amongst the other things, I heard him tell his class with great enthusiasm about the momentous visit of Ephraim MacDowell, the great ovariotomist, to Nashville to operate upon a Mrs. Overton near the Hermitage. He said that he had passed just beyond the campus there on the Lebanon Pike, and when he went to operate he had as an assistant no less a person than Old Hickory, General Andrew Jackson, who held the hands of his neigh-

bor, Mrs. Overton, and otherwise supported her fortitude.

He was a Kentuckian, and my father was also, and he worshipped his memory very much and made the thing live so that I too became inspired with the wonders that surgery might accomplish.

I heard him, too, say that Nashville had furnished three Presidents to the American Medical Association, Paul F. Eve, William K. Bowling, and William T. Breese. It never occurred to me that Nashville would furnish another President, my distinguished teacher and colleague, Dr. John A. Wither- spoon, and that even I should be so honored.

But I must feel that my father's industry and energy and ambition and inspiration and optimism made me revere and attempt to emulate the things which he held so dear. I can only look back upon his example and great encouragement as that one inspiration which has meant everything for me.

I've had a good time, too. I'm like the little darkey. They asked him how old he was, and he said, "My mammy says I'se seven, but countin' by de 'mount o' fun I'se had, I'se most a hundred."

Of these other twelve most distinguished Past Presidents of the American Medical Association, both white and colored, speaking as I do the pure African language, I can only say what the witness said when he was presented before the jury and asked if he knew any of them. He said he didn't know what they meant.

"Don't you know any of them?"

He didn't answer.

They said, "Do you know as much as half of them?"

He said, "My God! I know more than all of them put together." (Laughter and applause)

Dr. Jennings: In 1926, the American Medical Association turned its face to the rising sun again and elected as its President a representative of one of the surgical specialties who has reached the very highest rank in his chosen profession.

WENDELL C. PHILLIPS

I have the honor to present Dr. Wendell C. Phillips, of New York, the most distinguished Past President of the American Medical Association. (Applause)

Dr. Wendell C. Phillips: Mr. Toastmaster and Friends and Fellow-Workers in the medical profession: I was almost hoping

that I would be the last one that would be called upon to speak so that I could say that when he finally pronounced the benediction I was the greatest and most distinguished ex-President of the American Medical Association and I could say, "Thank God, he has told the truth at last." (Laughter)

But I think I am more ex-presidents than any one of the whole lot that have been mentioned here tonight. You know we also have an A. M. A. Golfing Association, and I am an ex-President of that. There is an ex-President's cup for which they strive every year, and I went out there this afternoon and added another laurel to my crown and won the ex-Presidents' cup of the American Medical Association Golfing Association. (Applause)

I think it is a very delightful thing to have a series of men called upon to relate incidents in their lives that have done the thing that apparently has led to their professional success. All of us could talk for hours on many such features, but the one incident that has had the greatest effect on a man's professional life, providing he has reached any distinction whatever, must be an interesting thing for anyone to listen to, and as I have listened to these men I have been profoundly impressed, and particularly, as in some cases, have noticed how slight those incidents are so far as the mere fact of relating them goes, but what a profound effect they had on the life of the man to whom they occurred

I had something of an experience like that myself.

Like Dr. Billings, I guess it was fortunate I started out to get my medical education without any money and spent three years in a medical school in New York City. I happened to have a singing voice, and during those years I sang in a church choir in the great City of New York. I don't know how they ever put up with it, but they did.

Toward the end of those three years, the woman who played the church organ and was the director of the choir, asked me one night after the rehearsal if I would stop, she wanted to talk to me for two or three minutes. She was a woman of wonderful ability and keen insight into character. She asked me what I was going to do after I finished my medical course. Being without means, being without friends, I told her: "I see nothing for me to do but to go back home up in Northern New York and begin

the practice of medicine in one of the small towns."

She said: "Has it ever occurred to you that it would be better for you if you would start practice in New York City?" I was so amazed and flabbergasted that I went home and I just couldn't think that such a thing could occur, but in her talk she said: "I have one or two friends here in the medical profession, and it is my belief that you could well get on in the practice of medicine in New York." Those introductions and the impetus that came from the mere suggestion finally determined me to make my career whatever it should be in New York City.

By the way, I didn't marry the woman, but we remained friends, and I never fail to tell her that I think her suggestion to me was the turning point in my professional life.

Anyway, I am going to tell you that I believe that I would have made a horribly incompetent country practitioner of medicine, and I think I have relieved the rural vicinities of a great deal of ignorance in the practice of medicine by staying in New York.

That was the one turning point in my medical experience that apparently has had the greatest effect.

One thing more. Immediately upon entering the practice of medicine, I connected myself with the medical organizations, and I have always attended medical meetings and have surrounded myself during these years in my county society and my state society and finally in the American Medical Association, with associates in those organizations and have tried to do my stunt in the development of the medical life of this country.

I think those two things are the two things that have had the greatest influence upon my professional life.

I am going to close by giving you one of my theories of life, and I can best put it in the form of the Norseman's philosophy.

"Man comes into this world naked and bare. His life is made up of sorrow and care.

His exit from this world nobody knows where,

But if he lives well here, he will do well there."

(Applause)

Dr. Jennings: In 1927, the Association turned again to the great West and elected a clinician, a teacher, a great surgeon, and

a leader in medicine in the Middle West. I have the honor to present Dr. Jabez North Jackson, the most distinguished ex-President of the American Medical Association. (Applause)

JABEZ NORTH JACKSON

Dr. Jabez North Jackson: I fancy that my reply to the inquiry of the evening would find echo in the hearts and experiences of a large number of my auditors tonight, namely, the inspiration of a father who was a successful and distinguished surgeon and clinician.

Under his inspiration I made up my mind to be a doctor when I was scarcely out of my swaddling clothes, and this was the decision of maturity. With him I began as a boy, still in college, attending medical society meetings, the last of which prior to his death was the meeting of 1889 at Atlantic City when he was elected First Vice President of this Association, which gave me the inspiration to carry on his work.

Through him I met many of the older and distinguished members of the medical profession. I always, therefore, have had that great reverence for these masters who have gone before, and under such inspiration have come the main things which have influenced me in my career. (Applause)

Dr. Jennings: It is difficult for those of the present to evaluate history and to give to our distinguished men their proper place, and it is impossible to say at the present time whether the present President of the American Medical Association is the most distinguished of all that have gone before him, but he is doing well, and if the character of the future is to be judged by the present, he is destined to take his rank with the great medical men of the country.

He said he had no speech, and he wouldn't speak, and I understand that he is very obstinate and we might have difficulty in getting him to speak, but I know he will. Dr. Harris, the President of the American Medical Association. (Applause)

MALCOLM L. HARRIS

Dr. M. L. Harris: Mr. Toastmaster, Members of the House of Delegates and most distinguished P. P.'s of the American Medical Association: I am very glad of one thing, and that is that as the result of my youth I haven't joined that class yet but enjoy the distinction of being in a class by myself tonight as the only President of the Association.

Being President of the Association and having been connected with it for so many years has made me change a little bit in my philosophy and change somewhat in the axioms which I formerly had in life. These two axioms are: First, that all habits are bad, therefore I have no habits; second, that the greatest pleasure in life is yielding to temptation.

Now, whether it is due to my association, to my very numerous medical friends of the American Medical Association, or somewhat to the few gray hairs which I have, I want to change that last greatest pleasure in life to the axiom that the greatest pleasure in life has been the association with the greatest group of men in this country, the American Medical Association.

They have been asked to mention the event in life which has had the greatest influence in determining their existence. I want to say that the greatest event which has contributed to my career was my birth, and I have to thank my mother for that.

I only hope that the pleasures which have been mine so long may continue and that I may wish to my successors that they may enjoy as great pleasures in their connection with the position which they are about to assume as have been mine during my short service as President. (Applause)

Dr. Jennings: As it is difficult to evaluate the present, it is even more difficult to evaluate a man's position in the future. But in electing William Gerry Morgan as President of the American Medical Association, the coming President or the President Elect, I think that what we know of Gerry, his scientific attainments, his delightful characteristics, his geniality, and all of the qualities that go to make up a delightful Southern gentleman, causes us to believe that Gerry will take his place eventually among the greatest Past Presidents of the American Medical Association.

WILLIAM GERRY MORGAN

I have great honor in presenting the President Elect of the American Medical Association, Dr. William Gerry Morgan. (Applause)

Dr. William Gerry Morgan: Mr. Chairman and greatest Past Presidents and the soon-to-be P. P., Fellows of the Association: I am reminded of Mayor Walker. Last winter a certain church in New York City was out for funds. They were to give a banquet, and they went to Mayor Walker

and asked him if he would address the audience at that banquet. He hesitated a minute, and said: "Yes, ladies, I shall be very glad to address your banquet, on one condition, that I be called upon to speak last."

They in their turn hesitated, but finally acceded. The banquet came off, and five speakers delivered themselves of what had been born in their minds or in the minds of somebody else. Then he got up to speak, and in an apparently very serious manner he said: "I should have been called upon to speak first."

Great consternation in the hearts of the arrangement committee.

"But," he said, "we can't all be first. Take, for instance, our great President. George Washington, first in war, first in peace, first in the hearts of his countrymen, and he married a widow."

My state of mind now reminds me somewhat of a conversation I had with the great Ham Lewis. He was speaking about an address that he was to give, and I said, "Senator Lewis, I would give five years of my life if I could get up and speak, unafraid, as you do."

He put his hand on my knee and said, "Good God, Doctor, unafraid! When I get onto my feet I am seized with incontinence."

In considering the introduction which our Chairman has given me, I am reminded of something that happened in the police court in Richmond, Virginia, this winter. A colored man was hailed into court for stealing, and the judge, who had known this man for a long time, said to him: "Sam, I am very much surprised, very much grieved to find you here charged with stealing, and much against my judgment I am going to sentence you to ten days in the workhouse."

"Oh, Judge, don't do that, don't do that, Judge, think of my poor wife. What will she do?"

"Well, Sam, I had a note from your wife this morning, in which she asked me to give you four weeks."

So Sam started out of the room, and at the door he turned around and said, "The only thing I can say, Judge, is there's two liars in this court, 'cause I ain't had no wife." (Laughter)

In considering the great honor which you have conferred upon me, I am reminded of Lord Kelvin who was presented with a medal for something or other, at the hands

of the king, and the king made his speech and Lord Kelvin said: "Your Highness, since there is no damned question of merit in it, I'll accept it."

Dr. Warnshuis didn't ask me to state what had influenced my life most. I think he thought that there wasn't enough in it to have had any influence on it. However when I was ten years old a revival meeting came to town, a Methodist minister came to stay at our house, and the first session was on a Saturday afternoon. I went to that revival with a bag of peanuts, and the good parson told us many things. During the time, he hammered and pounded and made merry, as they did in those days. When we came home, at supper the good parson turned to me and said, "Willy, what are you going to be when you grow up?"

I replied, "I am going to be a Methodist minister."

"And why is that, Willy?"

"Because I can hammer and pound all I want to."

So far so good. The next morning, Sunday, I was taken to church to hear the par-

son deliver a sermon, and after he had prayed for nearly two hours, I knew that I was going to be a doctor. That probably influenced my life more than anything else.

I am about to enter upon the great office, the greatest in the gift of medicine in the world. I do so with a great deal of humility and with a knowledge of my unfitness. I have felt that all along. But in the presence of all these Past Presidents I know how far short I measure up to the standards which have been set by the great men who have preceded me. With my humility, however, I am filled with gratitude for the great honor which you have conferred upon me. (Applause)

Dr. J. D. Brook: Gentlemen, this concludes the program of the evening. We are very happy to have had the privilege of entertaining you, and we want to say that this dinner is but one of the expressions on the part of the State Society of our appreciation and of our hospitality. We hope that you will like coming to Detroit so well that you will soon wish to come again.

The meeting adjourned at ten forty-five o'clock.

A. M. A. PRESIDENT WARNS AGAINST STATE MEDICINE

A warning to physicians of the country not to let their profession be made to share in the paternalistic tendencies of the times by means of the development of state medicine was given by Dr. William Gerry Morgan, of Washington, D. C., president of the American Medical Association, at the first general meeting of the association held in Detroit. Neither the public nor the physician will profit by government or state control of the practice of medicine, and neither the public nor the majority of physicians will be responsible if it ever comes to pass in this country, Dr. Morgan gave as his opinion. "I do not believe 'the people' will be responsible if the time ever comes when the medical profession supinely falls into the lock-step ranks of state-controlled servants," Dr. Morgan said. "It will be the fault, rather, of 'blatant propagandists' within our own ranks, operating through unthinking sentimentalists, political tricksters and noisome newspapers."

Dr. Morgan cited conditions in Europe where state medicine, under various sick insurance schemes, is actually operating. Dissatisfaction is felt there by both doctors and patients, however.

"No scheme has yet been evolved of state insurance, state medicine, or whatever it may be called, that has demonstrated unequivocally the advisability of going the limit in the matter of governmental control over individual health maintenance," he said.

Dr. Morgan traced the history of paternalistic tendencies of governments in other fields than medicine. He praised the work of the U. S. Public

Health Service, but decried any efforts to increase its scope beyond what it is now.

The economic argument that state-controlled medicine would result in lowered costs of medical care to the public was met by showing that the present high costs are not due to any profiteering on the part of the medical profession but result from other causes. Dr. Morgan quoted from reports of the Julius Rosenwald Fund and the Committee on the Cost of Medical Care to show where most of the money paid for sickness goes.

Doctors' bills amount to less than one-quarter of the \$2,841,000,000 which is the annual sickness expenditure in this country. About \$2,000,000,000 of this comes directly out of the pockets of the people for service they have received, the rest coming from federal, state and local taxes, private philanthropies and a few other sources.

"If every penny of the two billion which the people pay were equally divided among the more than 99,000 members of this association, how rich would we be?" Dr. Morgan asked. "The answer to this question should settle at once the charge that the high cost of sickness enriches the medical profession."

"When we view the whole of this problem of sickness and the individual or family budget, we fail to read into it any logical argument in favor of government-controlled medical administration, whether this control be federal, state or municipal within the definition given by this association."

Dr. Morgan suggested that this problem could be solved without the adoption of state medicine, in a manner more in keeping with American history, traditions and temperament.—Science Service.

TRUTH ABOUT MEDICINE

NEW AND NON-OFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Non-official Remedies:

Synephrin — Hydroxyphenylmethylaminoethanol Hydrochloride.—The hydrochloride of an alkaloid obtained synthetically. Synephrin is used as a vasoconstrictor. It is less toxic than either epinephrine or ephedrine, and its vasoconstrictor action, while not so pronounced as that of epinephrine, endures for a longer time. In combination with procaine hydrochloride it is useful for local anesthesia in dental operations and in minor surgery in cases in which a bloodless area is not required. The drug is also supplied in the form of Synephrin Solution "A," Ampoules Synephrin-Procaine, 3 c.c. and Hypodermic Tablets Synephrin-Procaine. Frederick Stearns & Co., Detroit.

Mead's Dextri-Maltose with Vitamin B.—A mixture containing approximately: maltose, 52.58 per cent; dextrans, 39.80 per cent; protein, 4.34 per cent; mineral salts, 2.28 per cent; and moisture, 1.00 per cent. It is standardized physiologically to contain in each 2.5 Gm. the Vitamin B₁ and B₂ equivalent of approximately 1 Gm. of dried yeast or 2 Gm. of wheat embryo. Mead's Dextri-Maltose with Vitamin B is proposed for use in the diet of infants suffering from Vitamin B deficiency. Mead Johnson & Co., Evansville, Ind. (Jour. A. M. A., May 3, 1930, p. 1405.)

RULES OF THE COMMITTEE ON FOODS

The Committee on Foods of the Council of Pharmacy and Chemistry publishes a revised statement of the information which should be submitted to the Committee by manufacturers who wish their food products included in the book "Accepted Foods." The Committee will consider all food products for which health claims are made as coming within its purview. If the health claims made are satisfactory to the committee, in view of the composition and process of manufacture, the committee will accept the product for its book "Accepted Foods" and will grant to the product the use of the seal of the committee. If the product is found to be outside the scope of the committee in that no health claims are made for it, and if the product and the advertising are otherwise satisfactory, the product will be exempted. A list of exempted products will be published in the book "Accepted Foods," and such products will be permitted to be advertised in the publications of the American Medical Association. A list of rejected foods will be published in the book "Accepted Foods" together with the reasons for such rejections. Rejected products will not be permitted to advertise in any publication of the American Medical Association. Infant foods, whether health claims are made for them or not, are considered to be within the scope of the committee's consideration. (Jour. A. M. A., May 3, 1930, p. 1407.)

THE LAXATIVE ACTION OF BRAN

Bran has acquired an extensive vogue in this country as an adjuvant to the diet to correct the widespread tendency to constipation. One of the

features that particularly serves to recommend it in a popular way is the fact that it is not a drug. (Jour. A. M. A., May 3, 1930, p. 1410.)

FOODS

Post's Bran Flakes with other parts of Wheat (Postum Co., Inc., Battle Creek, Michigan).—The product is composed of bran flakes with other parts of wheat, flavored with malt syrup and salt. It combines the advantages of wheat bran in a nourishing and appetizing food. (Jour. A. M. A., February 15, 1930, p. 485.)

COFFEY-HUMBER METHOD FOR CANCER

The remarkable publicity accompanying the introduction of the Coffey-Humber method for the treatment of cancer passed briefly into a quiet phase, leaped upward with the eastward jaunt to the congressional hearing, again became quiescent for a few weeks, and burst forth into a Sunday supplement feature. In the meantime pathologists, surgeons and other connoisseurs who have investigated the method express nothing but profound disappointment with both the clinical and the pathologic results. (Jour. A. M. A., May 3, 1930, p. 1410.)

USE OF THYROID IN OBESITY

The use of thyroid in obesity should always be controlled by a previous basal metabolism test. If this is normal or subnormal, it is safe for a physician to use thyroid. The best practice is to start with small doses of desiccated thyroid (Thyroideum, U.S.P.), gradually increasing. The small dose would be approximately 0.03 Gm. (½ grain) twice a day. The physician must keep a sharp lookout for fast pulse, nervousness or other symptoms resulting from thyroid stimulation. An obese person should not expect reduction by thyroid unless his diet is restricted, and when dietary restrictions are followed thyroid is not needed as frequently. (Jour. A. M. A., May 31, 1930, p. 1784.)

VITAMIN A DESTROYED BY RADIOACTIVE MATERIALS

New knowledge of the vitamins was disclosed at the Chicago meeting of the American Society of Biological Chemists. Destruction of Vitamin A by radiothorium was reported by Prof. A. G. Hogan, C. L. Shrewsbury and Gerald F. Breckenridge of the University of Missouri. This vitamin is important for promoting growth and for preventing eye disease. It is found in butter, cheese, eggs, spinach and liver. While the experiment was conducted with radiothorium, the inference is that any radioactive substance would have the same effect on this important vitamin.—Science Service.

FATAL POST-TRANSFUSION REACTIONS

In a series of 4,000 transfusions of unmodified blood reported by Osborne Allen Brines, Detroit, the mortality was 0.05 per cent. Incompatibility of blood was apparently not a factor in the production of these reactions. Cross agglutination of the blood of the donor and that of the recipient is superfluous provided the direct matching is properly done. The universal use of Group IV donors is strongly advocated as a means of preventing accidents and reducing the incidence of post-transfusion reactions. The blood group of an individual remains constant throughout life. The negligible mortality directly attributable to blood transfusion compared with the results obtained argues well for the efficacy and safety of this form of treatment.—Journal A. M. A.

THE JOURNAL

OF THE

Michigan State Medical Society

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Contributors are responsible for all statements, conclusions and methods in presenting their subjects. Their views may or may not be in agreement with those of the editor. The aim, however, is to allow authors as great latitude as the general policy of The Journal and the demands on its space may permit. The right to reduce in length or to reject any articles is reserved. Articles are accepted for publication on condition that they are contributed solely to this Journal.

All communications regarding advertising and subscriptions should be addressed to F. C. Warnshuis, M.D., 2429 University Avenue, St. Paul, Minnesota, or Suite 1508 Grand Rapids National Bank Bldg., Grand Rapids, Michigan.

AUGUST, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

A MUNIFICENT GIFT

The lay press of early June announced the benefactions of Mr. Cook, a New York capitalist and graduate of the law department of the University of Michigan, to his old alma mater. Mr. Cook's gifts to the University have been munificent. Remembrances in wills to state educational institutions have not been any too generous in the past. There may have been a feeling that what is everybody's property is nobody's property; or there may have been a disposition to ignore tax supported institutions, leaving their maintenance entirely to the taxpayer. Of course the University of Michigan has been remembered by its affluent citizens, evidence of which is to be seen in

the Hill Auditorium, the Clement Historical Library and the recent gift of a considerable tract of land by Colonel Edwin S. George of Detroit.

The late Mr. Cook in his will expressed his belief in the large influence of the legal profession upon the nation. There is no doubt of the great extent of that influence and we would not wish to diminish it but to improve it, make it more effective in the restoration of what is termed "law and order." Law and justice are conceived often in the same breath. It would seem to us to be the duty of the conscientious lawyer to have as his ideal the securing of justice and not to lend his ability and erudition as some have done to what sometimes amounts to the defeat of justice.

From the very nature of law its devotees are simultaneously trained for legislative positions, which accounts for the larger proportional number of lawyers in congress and in parliament than members of any other profession. The lawyer is trained in forensics, while we belong to what is known as the "silent profession." Divorce technic from medicine, dentistry or engineering and there is very little left. The doctor, dentist or the engineer must depend upon his art, directed of course by science. But science without technical skill is to a large extent helpless. Not so law. Then may we look for better trained lawyers who will be guided by the technical findings of science in its broadest sense, who will realize that truth and justice do not depend on besting an opponent.

SWEATING

Sweating has been considered largely as a mechanism for the regulation of body temperature. Professor Yas Kuno of the Manchurian Medical College has pursued studies which indicate that sweating is a more complex phenomenon than formerly believed.

In general, the sweat glands found over the whole body surface become active when the surrounding temperature is increased. The degree of sweating, however, differs considerably on different parts of the body, due both to the relative activity of the glands and to their distribution. Methods have been devised by which sweating in equivalent areas of the body are compared. Sweating is greatest on the exposed parts of the body and on those regions where the need of heat regulation is greatest, namely,

on the head, the neck, the dorsum of the hand and on the front and back of the trunk. It is less in the gluteal and mammary region where the skin is rich in subcutaneous fat. Contrary to popular opinion, perspiration under the armpits and between the legs is surprisingly low.

When the air temperature is raised, sweating increases over the whole body, the proportion of moisture given off varying according to the region. Even when a relatively small part of the body is exposed to increased temperature, there is a diffuse body perspiration. The palm of the hand and the sole of the foot, regions which have a relatively high moisture elimination, do not, however, show an increase in sweating with temperature increase; perspiration here does not seem to have the same physiological basis as it has elsewhere on the body.

With mental stress, however, the palms and soles perspire freely. When subjects are required to make mental calculations, the moisture elimination in these regions is markedly accelerated. Sweating is maintained until mental exertion subsides. Although the mechanism of this phenomenon is obscure, an interesting correlation is evident.

The palms and soles are specialized for grasping and for contact with foreign surfaces. Although a thick skin, papillary ridges, and a dense subcutaneous fascia increase friction forces, these forces are not maximum unless there is a small amount of moisture present. It seems possible that the sweating function in the palms and soles was specialized for the maintenance of a high efficiency of these structures as grasping organs. Although this function may appear to be of small importance to us, man's human and prehuman ancestors may have found it of real survival value. In primitive man and in the animals, mental stress is closely associated with physical effort; possibly the increased sweating upon the hands and feet of some remote ancestor under the influence of fear or excitement better enabled him to escape an enemy or to capture his food.

COST OF MEDICAL SERVICE

There has been a great deal said regarding the high cost of medical service, and, as is well known, a national committee is at work investigating the charge against the medical profession and ancillary factors in

the care of the sick. So far as the medical profession is concerned the grievance is more imaginary than real. A man will consider a fee of \$50.00 to \$75.00 exorbitant remuneration for a physician who brings him safely through a siege of pneumonia who thinks nothing of paying the same sum to a mechanic who overhauls his automobile.

But let us get down to facts: The accompanying copy of a "Fee Bill" agreed

FEE BILL	
ADOPTED BY THE	
ST. CLAIR AND SANILAC COUNTY MEDICAL SOCIETY,	
NOVEMBER 11, 1869, TO TAKE EFFECT IMMEDIATELY.	
PRACTICE OF MEDICINE.	THIRD CLASS OPERATIONS
First Visit, Prescription and Advice, - - -	Amputation of digit, - - -
Each subsequent visit to one patient, - - -	Pharyngotomy, - - -
Additional prescription for a patient in same family, - - -	Ligation of smaller arteries, - - -
Night visit between 10 p. m. and 7 a. m., - - -	Operation for fistula in ano, - - -
Visit and Consultation, - - -	" " " radical cure of hydrocele
Visit and Consultation after consultation, - - -	" " " phymosis and paraphimosis, - - -
Removal of the bone or previous arrangement during the night, except in cases of phlebotomy, - - -	" " " extirpation of tonsil, - - -
Midwife charged from office of physician, - - -	" " " Extirpation of tonsils and tonsils, - - -
Midwife in office, - - -	" " " Tapping hydrocele, - - -
Examination of urine, per urethra, and certificate, - - -	" " " Opening abscess, - - -
Physical examination of child, - - -	" " " Extirpation foreign bodies from pharynx, - - -
Visit to patient, Obstetric, - - -	" " " polypus from nose and ear, - - -
Midwife, visit, - - -	" " " Introducing catheter or bougie, - - -
Midwife, visit and malignant disease, - - -	" " " Other Operations, - - -
Services attended experts, - - -	Extracting foreign bodies from eye, ear, - - -
Attendance on patients (Foster's rates), - - -	" " " new, without and with, - - -
	Reducing hernia by taxis, - - -
	First introduction of catheter or bougie, - - -
	Each subsequent introduction in addition to visit, - - -
	Post-mortem examination, - - -
	Removal of hemorrhoidal tumors, - - -
	" " " common, after dismemberment, - - -
	Operative treatment of stricture of urethra, - - -
	Dislocations, - - -
	Reducing dislocation of hip joint, - - -
	" " " shoulder, - - -
	" " " elbow, knee or ankle, - - -
	" " " other dislocation, - - -
	Fractures, - - -
	Reducing and setting fractured tibia and forearm and compound fractures, at the first or principal dressing, - - -
	Reducing and setting other fractures, at the first or principal dressing, - - -
	Ophthalmic Surgery, - - -
	Operation for cataract, - - -
	" " " artificial pupil, - - -
	" " " strabismus, - - -
	" " " extirpation of eye, - - -
	" " " entropion, - - -
	" " " ectropion, - - -
	" " " structure of nasal duct, - - -
	Urologic Surgery, - - -
	Removal of fibrous tumors from uterus, - - -
	" " " uterine polypus, - - -
	" " " Simple incision of uterine neck, - - -
	Examination with uterine speculum, with treatment, - - -
	Operation for retro-vaginal fistula, - - -
	Reduction of inverted uterus, - - -
	General Surgery, - - -
	Attendance on surgical cases, per visit, - - -
	Groceries and supplies, in office, each attendance, - - -

Advice and Prescription at the Office to be Paid for in Advance.

ALL VISITS PAYABLE AT TIME OF SERVICE.

It shall be considered dishonorable for any member of this Association to attend families or individuals by the year, or to make any other bargain or arrangement, the tendency of which will be to nullify the full support and effect of the foregoing list of charges. It is particularly recommended to each member of the Association that all his unsettled bills be presented at the close of each year. Unsettled bills are considered of great importance to the interests of the profession. It shall be considered proper to make liberal deductions to all persons in arrears.

In all cases it shall be the duty of the physician or surgeon, who services contract to notify the patient or his friends, at or before the consultation, that the fee, mentioning the amount expected at the time when the services are rendered; and in case it shall not be so paid, the attending physician shall, unless otherwise requested by the consulting physician, make the charge or charges in his own bill, or send both accounts to the latter, and in such case he shall account to the consulting physician for, at least, his proportion of all money collected on said account.

upon by the St. Clair and Sanilac County Medical Society dated Nov. 11, 1869, shows the fees which prevailed sixty years ago. The reduction of our photostat copy renders the smaller type difficult to read without high magnification. In the practice of medicine the prevailing fees were as follows: first visit, prescription and advice, \$2 to \$5; subsequent visits, \$2 to \$3; additional prescription to patient in the same family, \$1.00; night visits \$4 to \$10; obstetrics \$10 to \$25; instrumental \$10 to \$50; all visits subsequent to accompaniment the same as for regular visits, \$2 to \$3. There is a long list of itemized fees for surgical service. Major operations ranged from \$100 to \$500. The fees for reducing dislocations of the hip joint from \$50 to \$100; a shoulder.

elbow, knee and ankle from \$25 to \$50. The scale for treating fractures ranged from \$25 to \$50.

The cost of practicing medicine today is infinitely greater than sixty years ago. Such items as rents, particularly in the cities of larger population, are out of all proportion to rents of those days. The cost of medical education today or any time during the past quarter of a century is greater and the time spent in pre-medical and professional training is likewise much longer. All factors considered, the cost of medical service is today actually less so far as the doctor's part in it is concerned, than sixty years ago. A great many physicians have not advanced their fees during the period of general price inflation during and following the war, in spite of the fact that the overhead had practically doubled, particularly in such laboratory specialties for example as roentgenology and clinical laboratory work.

Appended to the "Fee Bill" is the following declaration involving the ethics of the time:

It shall be dishonorable for any member of this Association to attend families or individuals by the year, or to make any other bargain or arrangement, the tendency of which will be to avoid the full purpose and effect of the foregoing list of charges.

All bills shall be considered due when services are rendered, and bills are to be presented at least twice a year, and settlement requested. It is particularly recommended to each member of the Association that all his unsettled bills be presented at the close of each year. Uniformity in this respect is considered of great importance to the interests of the profession. It shall be considered proper to make liberal deductions to all persons in moderate circumstances.

In all cases it shall be the duty of the physician or surgeon, who invites counsel, to notify the patient or his friends, at or before the consultation, that the fee, mentioning the sum, is expected at the time when the services are rendered; and in case it shall not be so paid, the attending physician shall, unless otherwise requested by the consulting physician, include the charge or charges in his own bill, or send both accounts in together, and in this case he shall account to the consulting physician for, at least, his proportion of all moneys on said accounts.

INTRAVENOUS UROGRAPHY

Urography, given its original impetus by Völcker and von Lichtenberg in 1905, after their successful pyelographic studies, has again come into the limelight by virtue of satisfactory diagnostic results following the administration of drugs intravenously. The thought that visualization of the renal pelvis and ureter might be accomplished by means of drugs excreted by the kidney has been uppermost in the minds of urologists ever since the instrumental or retrograde

method with the use of ureteral catheters was established. It is most interesting to note that von Lichtenberg has been intimately connected with the development of the more modern method.

The first valuable results achieved in the evolution of intravenous urography were published by Rowntree, Osborne, and their associates at the Mayo clinic in 1923. These workers used sodium iodide; were encouraged to find a surprising tolerance to the drug and in practically all instances obtained excellent cystograms. Because of little success with visualization of the renal pelvis and ureter, they did not advocate adoption of the method.

Roseno, in Germany, was more successful, using an urea-iodine combination called pyelognost, and reporting excellent results in 1929. This preparation, however, seems to have disadvantages, being poorly tolerated in certain types of disease with the diagnosis of which intravenous urography might be of particular value. Roseno advises against its use in the aged, debilitated, or those with heart lesions or known advanced renal insufficiency.

Uroselectan, on the other hand, is practically non-toxic; has been administered in all types of patients with sundry renal lesions and without harm. This substance, synthesized by Professor Arthur Binz of Berlin, in 1927, was used in von Lichtenberg's clinic early in 1929, and during that year enthusiastic reports were published by Swick and by von Lichtenberg, based upon practical clinical application. The excretion of iodine in the urine renders the outline of the urinary tract visible and also furnishes a potentially valuable functional test. During the present year, uroselectan has been available in certain American clinics and at the recent annual meeting of the American Urological Association in New York, a number of reports upon clinical experiences with the drug in urographic studies, were given from these clinics, following a presentation concerning the drug and the method of application by Professors Binz and von Lichtenberg, in person.

More recently, at the meeting of the American Medical Association, in Detroit, Swick and Binz again presented the subject, and in the Scientific Exhibit there were on display many of the films obtained by the method, at the Mayo Clinic; these gave graphic evidence that intravenous urography

has already proven a diagnostic measure of great value. Uroselectan is now available for general use and has been submitted to the Council on Pharmacy for approval.

Intravenous urography will not take the place of retrograde urography except in certain cases. Von Lichtenberg states that the indications for its use are three-fold:

1. Cases in which instrumental pyelography is impossible due to inability to perform cystoscopy and ureteral catheterization on account of anatomical, pathological, or technical reasons.

2. Cases with ureteral obstruction in which pyelographic solution cannot be injected beyond the obstruction.

3. Cases in which instrumental pyelography carries a risk for the patient.

The drug is excreted by the glomeruli, hence if the renal parenchyma is destroyed or temporarily inactive, satisfactory films are not obtainable, in fact no shadows are found where there is a non-functioning kidney. Again, if renal excretion is normal, the urograms are indefinite and incomplete, due to too rapid excretion and lack of sufficient concentration in the renal passages. Therefore, intravenous urography is valuable in direct proportion to the accuracy of its interpretation.

ROBERT E. CUMMING, M.D.,
Detroit, Mich.

APPRECIATION

AMERICAN MEDICAL ASSOCIATION
535 N. Dearborn St.,
Chicago, Ill.,
July 2, 1930.

Dr. F. C. Warnshuis,
Grand Rapids, Michigan.
Dear Doctor Warnshuis:

In accordance with instructions received from the Board of Trustees of the American Medical Association and from the House of Delegates, I am writing to convey to you and, through you, to the officers of the Council of the Michigan State Medical Society a very sincere expression of appreciation for the delightful hospitality extended to the officers of the American Medical Association and to the members of the House of Delegates during our annual session held in Detroit last week.

The arrangements made for the comfort and convenience of the Board of Trustees during their regular meeting could not have been excelled, and the gracious hospitality

extended to the officers of the Association and the members of the house of Delegates on Monday evening could not under any circumstances have been more delightful. The facilities provided for various meetings and exhibits were splendid; the work of the Local Committee on Arrangements was done in the kindest and most efficient manner, and the members of the Association who attended the session were the recipients of the most kindly courtesy on every hand. Many expressions of appreciation have come to me from members of the House of Delegates, from officers of the Association and from numerous individual members who were at Detroit.

I am very sure that the Detroit Session and the very gracious hospitality extended by members of the Wayne County Medical Society and by the officers and members of the Michigan State Medical Society will be long remembered.

With most cordial good wishes, I am
Very truly yours,
OLIN WEST.

BEAUMONT FOUNDATION LECTURE

"T. Wingate Todd is the author of the latest series of Beaumont Lectures, motivated by the Wayne County Medical Society of Detroit. Dr. Todd writes on Behavior Patterns of the Alimentary Tract. The divisions of the subject are three: I. Principles of Gastric Motility; II. Gastric Behavior Patterns; III. The Large Bowel. The Beaumont Series is very popular, not only because of the low price at which each number is sold (\$1.00), but because they are prepared by prominent authors and because they are addressed to matters of wide interest."—From Kalends, published by the Williams and Wilkins Company, Baltimore, who are the publishers of the Beaumont Lectures.

Comment has already been made in the Journal of the Michigan State Medical Society on this lecture foundation series. Each member of the Wayne County Medical Society receives a copy of these lectures by virtue of his membership. The attention of the members of the Michigan State Medical Society outside Wayne County is drawn to the publication. Many doctors have come into Detroit to attend the lectures, as an invitation has been extended to all State Society members. These lectures are on basic scientific aspects of medicine. The purpose is to make the application as broad as possible. Several of the back numbers of the Beaumont Foundation volumes are out of print. The highly scientific character of the series has rendered it very valuable.

A. M. A. PAST PRESIDENTS' DINNER

Our State Society entertained the Officers and House of Delegates of the A. M. A. with a Past-Presidents' Dinner, at the 1930 Detroit Session. As guests of honor, we had the living past presidents of the A. M. A. in attendance at that session. Each past president was advised in advance that he would be called upon to relate the event or incident that exercised the greatest influence on his life.

Their responses are published in this issue, just preceding the Editorial page. Surely our members will enjoy and profit by the remarks of these leaders in American medicine.

F. C. W.

SAYS CANCER THREATENS FOUNDATION OF CIVILIZATION

"Cancer has outgrown its classification among the diseases common to mankind. It threatens the very foundation of civilization," declared Dr. William H. Kraemer, of the Tumor Clinic, Jefferson Hospital, Philadelphia, at the Detroit meeting of the American Radium Society. "The realization of the seriousness of cancer is the most pressing medical problem confronting the physician at the present time," Dr. Kraemer said. The difficulty of diagnosing the disease is the weakest link in the present system of management. The public likewise is not sufficiently impressed with the need of an early discovery, in order to effect a cure of the disease. Because the average patient does not know enough about the present proved methods of cancer treatment, he lacks faith in the medical profession and as a result patients by the thousands follow fake cancer cures around the country, Dr. Kraemer said.

The entire success of cancer treatment depends on early diagnosis by the clinician. He must become so skilled that he will be able to recognize it in the early stage in his patients. Dr. Kraemer recommends that in every medical school cancer should be taught as a separate major subject and that every hospital connected with a medical school should have a tumor clinic. By this means every graduate would gain practical knowledge of the early symptoms of cancer and how to diagnose it. Dr. Kraemer reviewed the present knowledge of cancer and said that many workers are turning to the view that cancer is a general systemic disease. The fact that not a single invariable factor in the origin of cancer has been isolated strengthens the general systemic theory of its cause. For treatment, Dr. Kraemer advised surgery, X-ray and radium with lead as an adjunct in special cases, though it should never be used alone as a major treatment.

At the same meeting, Dr. W. L. Clark, of Philadelphia, described electrosurgical methods of treating cancer and allied diseases. This method should be considered an adjunct to general surgery and not as something different and separate, he said. For cancer or similar conditions in breast, chest, sinus, pelvis, abdomen and particularly for small growths on the eye, the method has been found helpful. Dr. Clark predicted that with greater improvement in instruments and technic, electrosurgery will continue



A DOCTOR'S HOBBY

This piece of statuary is the work of Dr. Charles E. Dutchess of Detroit. Dr. Dutchess devotes his major time to the practice of gynecology and obstetrics and as an avocation he indulges in sculpture. This bust of Harvey is modelled from a cake of soap. What the doctor would accomplish with deathless marble or bronze it is difficult to say, for we think that this is a very superior piece of work. While commending Dr. Dutchess we would not overlook the work of Frank M. Ruslander, of Harper Hospital, Detroit, who photographed this little bust. An object entirely white is a difficult subject for the photographer. Mr. Ruslander is also to be congratulated on his part in the reproduction.

to grow in usefulness and will in time be found indispensable in surgical practice.

The general conception that cancer of the skin is a comparatively benign condition is not correct, Dr. Isaac Levin, of New York City, told the members of the society. This type of cancer may be fully as malignant in the skin as elsewhere. The variations in the course of the disease depend on the difference in the structure of the tissues attacked. Cancer of the lower lip is very malignant because it has a rich supply of lymph nodes. In cancer of the skin of the ear, the greater malignancy is due to the close proximity of the cartilage which easily becomes necrotic and interferes with healing.—Science Survey.

COMMUNICATIONS

July 10, 1930.

F. C. Warnshuis, M.D., Secretary
Michigan State Medical Society,
Grand Rapids, Michigan

Dear Doctor Warnshuis:

The Pennsylvania members of the 1930 House of Delegates of the American Medical Association in caucus assembled June 25, by unanimous vote directed the undersigned to convey to the officers and members of the Michigan State Medical Society the thanks of the delegates from Pennsylvania for the entertainment given at the Detroit Yacht Club on the afternoon and evening of June 23, 1930.

Yachting is indeed uncommonly enjoyable entertainment for Pennsylvanians, and the opportunity to pay tribute to the ten or more "most distinguished ex-presidents of the American Medical Association" who were present, was doubly appreciated.

I am sure that the 292 members of the Medical Society of the State of Pennsylvania and their accompanying ladies who enjoyed the social diversissements provided by the Wayne County Medical Society will lead their fellow-members in the Medical Society of the State of Pennsylvania (8,000 members) in urging all Michigan members of the A. M. A. to come to Philadelphia in 1931.

With kind personal regards, I remain.

Sincerely yours,
WALTER F. DONALDSON, *Secretary*.

July 3, 1930.

Dr. Fred C. Warnshuis,
1508 National Bank Bldg.,
Grand Rapids, Mich.

My dear Doctor:

I cannot refrain from writing you a few lines to express my gratitude to you and your State Society for the wonderful banquet you tendered to the Officers and the House of Delegates of the A. M. A. It was beautifully put on, and I hope you and your good fellows will think that we did you credit.

With all good wishes, I am,
Very truly yours,
WENDELL C. PHILLIPS.

June 27, 1930.

Dr. F. C. Warnshuis, Secretary,
Michigan State Medical Society,
National Bank Bldg., Grand Rapids, Mich.

My dear Dr. Warnshuis:

This is to congratulate you most heartily and the officers of the Michigan State Medical Society in giving a most splendid entertainment to the officers, members of the House of Delegates and the ex-Presidents of the A. M. A. on Monday, June 23, 1930.

The dinner was excellent and the program was most interesting. Dr. Jennings, as the toastmaster, filled the place splendidly.

This sort of gathering is not only enjoyable, but will have an enormous good influence on the conduct of the fellows of the A. M. A., making them more loyal to our great medical organization.

Please accept my personal thanks and believe me, with much esteem,

Cordially yours,
FRANK BILLINGS.

DEATHS

DR. CARL S. OAKMAN

Dr. Carl Oakman, who had been engaged in X-ray practice in Muncie, Indiana, died on the 20th of June at the University Hospital, Ann Arbor, Michigan, from brain tumor. He was fifty-four years old. Dr. Oakman shortly after his graduation from Harvard University located in Detroit in the year 1907. After several years of practice he entered the Digestive Ferments Company where he held an official position for thirteen years, and for three years he was president and general manager of the Wilson Laboratories of Chicago. Dr. Oakman, once a member of the Boston Symphony Orchestra, was one of the most talented violinists in Detroit during his residence there. In 1924 he returned to the University of Michigan as a member of the University hospital staff, and two years later went to Muncie, where he practiced to the time of his death. He is survived by his widow, one son, and two daughters.

THYROTOXICOSIS IN ELDERLY PERSONS WITHOUT SIGNS OF GOITER

Hugo A. Freund and Warren B. Cooksey, Detroit, report five cases and call attention to the fact that primary hyperthyroidism frequently occurs in elderly persons without visible or palpable goiter. These patients more often present symptoms referable to the gastro-intestinal tract as their initial complaint. The usual signs of exophthalmic goiter are generally obscure. Compound solution of iodine promptly controls and terminates the vomiting, which in one instance had persisted for four weeks without relief. Subtotal thyroidectomy is often necessary. Prolonged preliminary treatment, however, is essential to prepare these patients for operation. Their response to treatment is striking and progressive, materially improving their chances for recovery from operation. In the two cases that came to operation, intensive preliminary treatment did not prove adequate. In three cases the continued use of iodine solution with only slight periods of interruption has succeeded in arresting the hyperthyroidism. Its prolonged administration in these cases has not produced ill effects. Its continued administration is apparently essential to maintain the patient's sense of well being.—Journal A. M. A.

SUPPURATION OF PARANASAL SINUSES AS FACTOR IN FOCAL INFECTION

In a review of the histories of 400 cases made by Carl M. Anderson, Rochester, Minn., sinusitis was not a factor in focal infection. Teeth, tonsils, the prostate gland, and other foci are of more importance. Suppurative sinusitis may be a focus of infection on rare occasions. In a patient with a nose normal on clinical examination, and with a history negative for diseases that can be referred to the nose, any exploration which involves mutilation of the nasal membranes is not justified. Unnecessary trauma reduces the resistance of the membrane and may introduce infection. Toxins are absorbed by the blood stream, but bacteria are rarely transmitted to distant parts of the body from the paranasal sinuses. Existing infection of the nose and paranasal sinuses should be treated in the most conservative manner consistent with the complete eradication of the disease.—Journal A. M. A.

Benton Harbor and St. Joseph Bid You Welcome To Our 110th Annual Meeting, September 15, 16, 17, 1930.

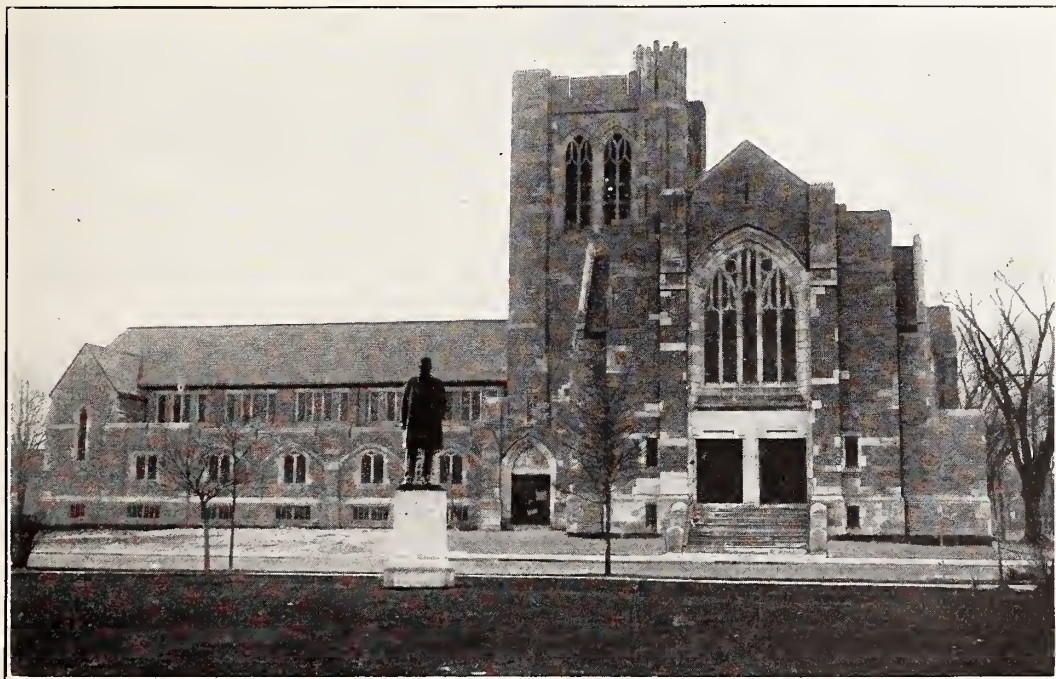
GREETING FROM THE BERRIEN COUNTY MEDICAL SOCIETY

Fellow members of the constituent Societies of the Michigan State Medical Society: We the members of the Berrien County Medical Society extend to you the most cordial of invitations to visit our community at the annual meeting of the Michigan State Medical Society in September.

We have attempted in this issue to tell you something about our Society, our cities,

wish to make an impression on you so that at any future time when you or your friends are looking for a place to enjoy yourselves, you will think favorably of the Twin Cities of Michigan.

We urgently request that you extend this invitation to your wives, whether or not they are members of the auxiliary, as our local women have completed plans to see that they are entertained during the entire time; that they are kept busy, and do not



SONNER HALL AND CONGREGATIONAL CHURCH
Benton Harbor

and our health facilities, in other words the usual "booster club blah." However, man to man, we are going to do our best to make your visit worthwhile. The various section officers have arranged an unusually good program and we have tried to provide pleasure for you in the leisure time.

Our hotel facilities are ample, and, as you can see from the list, there are accommodations to suit every pocketbook. Our more reasonable places are decent, clean and attractive. Our expensive places were designed to give you all the luxuries found in any of the resort centers of this country. We have held conferences with the hotel managers and we can assure you that you will not be preyed upon because you are making a short visit. In other words, they

have to depend upon friend husband to provide transportation or company.

We trust that you will appreciate the slogan of our Society, "For Knowledge and Fellowship," and to this end we will endeavor to make your visit worth while and entertaining.

It is our contention that most of the members attending the meetings drive their own cars, and with this in mind we will have members of the Boy Scouts present at the roads leading into the city to act as guides. If you have your reservations they will guide you to your hotel and there you will find an information desk for any other particulars you may wish.

When you register get an M. S. M. S. visitor's sticker for your car so that outside

of flagrant violations you will be protected by the police. If you come by bus, train, interurban or boat, hail any car with an M. S. M. S. courtesy sticker and you will be transported wherever you wish.

Any of you who wish to arrange golf



J. J. McDERMOTT, PRESIDENT
Berrien County Medical Society

matches may play them at the Twin City Golf and Aviation Club or the Berrien Hills Country Club, either of which are sporty courses. Any others who wish to play away from the angry mob may travel three miles out of St. Joseph to the Martin Hills Golf course or five miles out to the Tabor Golf course at Kings Landing outside of Benton Harbor. Last minute arrangements can be made on your arrival as there is plenty of room for all.

The African golf players will have to seek their own courses, although it is said to be a popular game in this part of the world.

Any sections or groups who wish to hold special dinners or banquets can make arrangements direct with the hotels or write to the Chairman of the Entertainment Committee, Dr. L. M. Rutz, of Niles, or to the Secretary, W. C. Ellet, at Benton Harbor.

It is requested that if you are a delegate or an officer that you send in your reservations at once to the Hotel Whitcomb in St. Joseph or if you do not plan to be here on Monday but are coming for the Scientific sessions on Tuesday and Wednesday we advise you to make reservations in the Benton Harbor hotels.

If you stay in St. Joseph and do not drive your own car there will be courtesy cars plainly marked that will transport you the short distance to the Harbor. Those who stay in Benton Harbor are within easy walking distance of the meeting place.

We want to do everything in our power for your enjoyment and if anything goes wrong with your accommodations or treatment we will appreciate the complaint and attempt to adjust matters.

Come early and stay late. Don't forget that primarily you are here for knowledge, but when your head gets too stuffy or after school is out there are plenty of places to play. To those of you who wish to get boiled out in the morning try a famous Benton Harbor-St. Joseph mineral bath and start out for the meeting full of pep.

Here's how! If you don't enjoy yourself it won't be our fault. Grease up the car, load the tank, buy your ticket if you come by rail, grab the wife and off for The Heart of the Fruit Belt, where Nature smiled and gave her all, and Man grinned and toiled at her beck and call, developed her wealth into joy and health, for you to perceive, partake and share, in all of the bounteousness available there.

BERRIEN COUNTY MEDICAL SOCIETY,
W. C. ELLET, *Secretary*.

BENTON HARBOR AND ST. JOSEPH THE TWIN CITIES OF MICHIGAN

Although commonly called Twin Cities, in regards to ages the cities of Benton Harbor are more like mother and child as St. Joseph was one of the earliest settlements on the west coast of Lake Michigan, while Benton Harbor dates back to the boom following the Civil War.

St. Joseph was founded at the mouth of the old St. Joe river by the early French and Spanish explorers. There are still said to be evidences of the old settlement found in the shifting sands of the nearby dunes.

Furs and grain and lumber were floated down the St. Joseph river and carried by boat to Fort Dearborn which later became

Chicago, and trade of this early day is still carried on by the methods of modern transportation. Massive freight and passenger boats still carry a great bulk of the traffic to Chicago while the railroads, trucks and cars supplement the older but cheaper method of handling freight and passengers.

Across the river from the early settlement of St. Joseph was a marsh built up by the flood waters of the river, and beyond this were wooded sand hills, or, as they have in recent years become known, the Sand Dunes of Lake Michigan. An old corduroy road led from the hills across the marsh to the ferry at the river. The road was impassable in the early spring, being covered with water often three or four feet in depth.

However, one woodsman with vision started a lumber mill whose specialty is now a lost art, that of manufacturing of bungs for the wine and cider barrels. A little settlement of hardy lumbermen and farmers soon formed, hard drinkers and hard workers, and the mother town of St. Joseph across the river named the settlement Bung Town.

The Bung Towners found that methods of transportation were poor, because of the marsh, and so built a ship canal from the St. Joseph harbor through the swamp to the higher ground at the foot of Morton and Bronson hills, so named because of the men who owned the property. The guiding spirit of that early booster club was a man named Benton and the settlement of Bung Town became incorporated into a village and named it Benton's Harbor.

With the canal and the railroad the town began a steady growth until today it has more than doubled the size of its mother city of St. Joseph and they are now called Twins.

The advent of the fruit industry, when it was discovered that Lake Michigan so tempered the cold winds that there are spots of land called frost proof, made the Twin Cities the natural market points for distribution.

This strip of land only 15 miles wide and about 30 miles long became known as the Fruit Belt of Michigan, and its apparently barren sands have given so generously that the Fruit Belt of Michigan is rated without doubt as the second most fertile spot in the United States.

After the fruit came the factories, the ready access to labor, the transportation by

land and water, the diversity of industry have made the communities grow. Following along with the growth of industry all over the central states, the Shores of Lake Michigan, because of their accessibility as well as beauty, became the natural and logical place for summer resorts.



W. C. ELLET, SECRETARY AND TREASURER
Berrien County Medical Society

Now Benton Harbor and St. Joseph have become known not only as the Heart of the Fruit Belt, but also as the Resort Cities of Southwestern Michigan, and have factories so diversified in their output that there is hardly a community in the world that does not have some article manufactured in the Twin Cities.

Drilling for oil thirty or more years ago brought forth not an oil but a healing water. The famous mineral water of Benton Harbor and St. Joseph, loaded with its magnesium salts and sulphur, actually does relieve that tired feeling of the jaded business man, who is resting at the nearby resorts. Even though the medical profession have seen so much of exploited cures, the local fraternity readily admit the beneficial effect in chronic rheumatics and nephritics after bathing in these mineral waters. The sooth-

ing effect of the hot salts solutions, empiric though it may be, does give relief.

The mystery of so many well equipped and large hotels is explained by the mineral baths and the resort facilities. When you lay your plans for the State Medical Meeting in the Twin Cities in September you



HOTEL VINCENT, Benton Harbor

will know, if you have not already paid an extensive visit, that you are going to enjoy the pleasures of:

"The center of the Michigan Fruit Belt, where nature gave so lavish of all she had, woods, streams, lakes, hills, and smiled while man added orchards, camps, paved roads, golf, aviation and all the sources of pleasure to be found anywhere, conveniently centered in and about the Twin Cities of Michigan. The center of the resort section and capital of the fruit industry of lower Michigan."

In the summer and early fall here may be found the luscious melons, peaches, apples and grapes, besides all the pleasures in sports and amusements that one would find at any vacation spot.

Most cities are able to advertise one occupation or product as their principle asset to attract attention from the outside world. Here one finds four; combined they are fifteenth in the State in industrial value; the largest municipal cash fruit market in the world gives them their horticulture standing; giving one hundred and twenty-five

thousand mineral baths annually places them high as a health resort, and they annually entertain more individual pleasure resorters than any other community in the state. Business is never all bad here. The Twin Cities are always going good, because of so many avenues of revenue.

In hotel rooms they rank fourth among the cities of the state; have five golf courses, an airport, the most miles of hard surface roads in the state (except Wayne County). They are located on U. S. Highway No. 12 and 31; have three railroads, the Goodrich Transit Company, one interurban, a first class street railway system and several bus lines. The theaters are handled by the Butterfield circuit; large dancing pavilions, bathing beaches and amusement parks, (including the House of David).

Few places, indeed, have been so favored by nature in every respect as have the Twin Cities. Situated on the high bluffs on each side of the St. Joseph river, overlooking the broad expanse of Lake Michigan, and the junction point of the Paw Paw and the historic St. Joe in the low land between, is the wonderful setting of these two communities. The air is kept fresh and clean by the prevailing westerly breezes, and extremes of heat and cold are rare and of short duration. The cities have a good natural drainage and enjoy great freedom from epidemic disease.

A visit to this delightful community will be long remembered. September is usually one of the most delightful months. Come for your business and learning and then tarry with us if you will as long as you like to play.

HOSPITALS AND HEALTH FACILITIES OF BENTON HARBOR AND ST. JOSEPH

By C. N. SOWERS, M.D.

Benton Harbor and St. Joseph are well provided with hospital and health facilities. Prior to 1900 when the communities were about one fourth their present size there were no hospital facilities and operative cases were forced to go the ninety miles to Chicago.

With the growing demand for hospital beds the late Dr. H. V. Tutton, pioneer surgeon of this district, established a small private institution which afterwards proved to be the nucleus of the present hospital.

This early attempt at providing a suitable place showed the people the necessity for a hospital. Under extremely meager facilities, and what would seem to most of us today as dangerous procedures, the physicians of the community worked with Dr. Tutton, made a success, and built a reputa-

directors. The staff is under the leadership of a chief elected by the attending physicians. Dr. H. V. Tutton was Chief of Staff from the beginning to his death four years ago, when the writer of this article was given that honor.

Almost complete facilities for the staff



HOTEL WHITCOMB, St. Joseph

tion for care and safety in their little old converted house.

In February of 1904 articles of incorporation were formed for the establishment of a Public Hospital and Training School for Nurses, known as the Benton Harbor Hospital Association. Benefactions from a few public spirited citizens, notably George F. Sonner, Professor and Mrs. Owen, and A. R. Nowlen, with a balance raised by popular subscription, provided the initial funds. A site of four acres was purchased, and the present Mercy Hospital became a reality, opening for the reception of patients in 1907.

Since that time an annex has been added, doubling the original building's capacity. Fifty beds are now available besides a home for nurses. The Training School for Nurses has been constantly maintained under high standards and an associate course provided with the Children's Hospital in Detroit, also Grace Hospital, Detroit.

The staff is an open one, membership being by election of the members. The administration is carried out by a board of

are provided, a laboratory with full time technician and an excellent modern X-ray plant.

Almost since its inception the hospital has been self-supporting. Yearly subsidies by the city and private individuals are for comparatively small amounts.

Tentative plans for enlargement according to the growth of the community have been laid and the ground purchased in the original grant is available.

In addition to the public hospital in Benton Harbor the Twin Cities have two private institutions. One in St. Joseph, known as the St. Joseph Sanitarium, is controlled and operated by Dr. T. G. Yeomans. Dr. Yeomans, a surgeon, has several men associated with him on his regular staff. The institution has been in successful operation for a period of 15 years and is completely equipped with all the necessary facilities, and is on the recognized list of the College of Surgeons. While operated as a closed hospital the institution is open to physicians of Berrien County for referred work, and is the only hospital in St. Joseph.

The other hospital, owned and operated by Dr. R. B. Taber, is in Benton Harbor and incorporated under the name of The Britain Sanitarium. This is also a private institution with a staff of associated physicians. Like the St. Joseph Sanitarium, it is open to physicians of Berrien County for

usually the busiest month of the year for the profession.

The bath hotels, of which there are five, attract large numbers of chronics at all times of the year but more particularly in the summer. Practically all these hotels have house physicians who are members of the Berrien



ST. JOSEPH SANITARIUM, St. Joseph

referred cases. This hospital has been in operation since 1920 and is well and favorably known in the community.

The health work of the communities is carried out under the respective city governments. Both towns employ a part time Director of Public Health and city nurses. The schools are cared for by their own nurses appointed by the school boards.

There are no municipal clinics. Indigent cases come under the care of welfare workers and the public health nurses. Where medical attention is necessary the patient is allowed to choose his own physician and the bill for medical services is certified by the social workers and paid by the municipal governments. A reasonable fee is allowed and there is very little criticism on the part of the public or the medical profession.

As an example of the efficiency of this system, in the figures released for infant mortality in Benton Harbor three years ago, this town was second low of all the cities of its size in the United States.

Contrary to the usual busy season for doctors in the winter months for other parts of the state, the summer season carries the peak load for this community. During the summer months the population usually trebles due to the resorters, and August is

County Society. The mineral water is loaded with sulphur and magnesium sulphate in almost saturated solution. Each bath house has its own wells which average from 800 to 1,200 feet in depth.

Whether it is due to psychic reactions, or rest, the fact remains that chronic rheumatics are greatly benefited by the mineral baths. The bath houses have been in operation for over 25 years and have many enthusiastic followers who come here year after year on advise of their physicians in distant cities.

Living conditions in the Twin Cities and vicinity are almost ideal, and while we have all the advantages of community life in the small town, we are also within commuting distance of Chicago and able to enjoy all the advantages which are obtainable only in the largest of cities, without the disagreeable features which are unavoidable when living in a metropolis.

The various hospitals invite all who are interested in visiting them during the convention, and while we realize that the majority of hospitals on the whole are alike and therefore uninteresting to the average physician, who must of necessity visit them daily, still there are a few interested in hospital administration who will be cordially received.

HISTORY OF BERRIEN COUNTY
MEDICAL SOCIETY

By F. J. WITT and ROBERT HENDERSON
TWIN CITY ORGANIZATION

The present Berrien County Medical Society was organized in 1897, succeeding a defunct organization which had ceased to exist some years before, and reaching out to bring in the unorganized men practicing in the communities outside of the county seat of St. Joseph. Some of the charter members of this group of early physicians are still alive and in active practice, many of the others, though passed on for years, still have many tender memories alive in the hearts of the people of this community.

Among the men who organized this Society were Drs. John and George Bell, H. V. Tutton, A. H. Scott, Suydan Ryno, deceased, and in active practice are Drs. W. L. Wilson, and Hattie Schwendener, who just recently completed 50 years of active practice, besides the writer.

The present organization has continued uninterruptedly ever since, and it is probably not unique that at times it barely functioned, but never really died or demanded reorganization. The most serious crisis was when it fell in line with the State Medical Society under its new charter which broadened the original requirements for membership. Many of the older and leading men in the profession withdrew from the Society and never took any interest in it again. Crippled though the organization was, by the loss of men of standing, it did continue to exist. Added enthusiasm was given by attendance of members from the south end of the county, which had long been held together by the leadership of the late Dr. Henderson, father of Dr. Robt. Henderson who has collaborated in the preparation of this short history of the Berrien County Society.

At present we have a very live and active organization, rejuvenated since the war by the many of its members who served in the Army and Naval Forces and welded into a harmonious society for the good of each other and to benefit the public.

Our meetings are held once every month except for the two months of January and February when due to the inclement weather and difficult travel the meetings are adjourned. In recent years it has been our custom to alternate the meeting places, one month in the south end of the county usually at Niles, and the next month in the north

end of the county at St. Joseph or Benton Harbor.

Because of the necessity of half of the membership under this plan driving 20 or 30 miles to attend a meeting it has been customary to have each meeting a dinner gathering. Our slogan may truly be said to be "For Knowledge and Fellowship." A great deal of attention has been given to making the meetings friendly as well as interesting and instructive. It is fair to assume that we have succeeded, as the interest has not only kept up, but has increased. When exceptional meetings are held, invitations are exchanged with the Kalamazoo Academy and the St. Joseph County Medical Society of Indiana composed of the physicians of South Bend, Elkhart and Nishawakee. Many warm friendships have been formed in this manner with the physicians from these other communities, and the exchange of ideas has greatly aided us. Our geographical position, which always before has kept us isolated from the State Society seeking instead Chicago and South Bend for clinical and post-graduate instruction, has been gradually welded to the north and east by this policy so that in recent years by our united efforts the other county societies of the Michigan State Society have heard of our existence.

The friendly relations with the Kalamazoo Academy and the Cass Society of this consular district has brought about a joint association with the Cass County Society, many of whose members because of their proximity to Kalamazoo have previously held joint membership with the former society. Now the Cass County Society, while still maintaining their own identity and officers, attend the meetings of the Berrien County Society and quarterly act as hosts to the latter. This association has been very pleasant for both societies. The Cass members, because of their much smaller numbers were formerly unable to secure speakers without the embarrassment of providing a small audience, and under the new arrangement they attend the Berrien meetings and swell the attendance of our organization.

With the attendance of these visitors our average number present at meetings in the past few years has been consistently over 100 per cent of the total membership.

SOUTH BERRIEN AND NILES ORGANIZATION

The early days of organized medical activity in and around Niles were extremely

interesting, and through the close association with my father, before I even considered the study of medicine, I came into contact with many incidents which remain fresh in my mind.

What was probably the first diphtheria anti-toxin administration in the county was a humorous affair, in some respects. Obtaining a supply of the serum, Dr. Henderson drove out in the country to the diphtheria case. The father of the child was determined that no experimenting was going to be done on his child. A strong, husky friend persuaded the child's father to go out to the barn where he was forcibly detained while the antitoxin was injected.

The marked recovery sold diphtheria anti-toxin to the community and the irate parent became not only a strong booster for the preparation but for the doctor as well.

Niles was quite a prominent village, being one of the oldest settlements in the state and having the distinction in its lifetime of being under the command of four different nations. Nearly always in the early days there was a physician at the post, or, if not, the medical work usually fell on the hands of the local priest or the sick would be transported up the river to the church and school at the south bend of the river where a Jesuit settlement had been founded. This settlement and school later became Notre Dame University and the village nearby the city of South Bend, Indiana.

Niles has always been a transportation center. In the early days the boats came up the river from St. Joseph and the rafts and barges coming down from as far up as Three Rivers and Mendon, at which latter place another settlement of French Catholics was located. Then later the main line of the Michigan Central from New York to Chicago and the establishment of the large freight yards from which the huge through freights are made up for both east and west.

From this brief history of our end of the county it can be seen that while acting nearly always as a depot town and then city our local profession has been in constant contact with the physicians in the nearby towns, so that it was but natural that the local men should join the association of professional men of the county and were instrumental in its inauguration.

The earliest recollection I have of a Berrien County Medical Society was in 1889, when I drove with my father, then practicing in Buchanan, to Cassopolis where the

Berrien and Cass County Societies held a joint meeting at Forrest Hall, Diamond Lake. Dr. Green of South Bend, a surgeon, was the speaker of the afternoon, and the recent re-association with the Cass County Society shows the repetition of history.

About once a year my father would go to St. Joseph, on the train, and attend a medical meeting of the old Berrien County Society that Dr. Witt mentioned in the first part of this article as the forerunner of the present organization, and I remember distinctly of a meeting in Buchanan in 1893 in which Dr. Henderson gave a report of several cases of diphtheria which he had successfully treated with antitoxin, the first to be used in southwestern Michigan. This was the year that he was president of the Society.

Other pleasant little memories of the early physicians have been recalled, such as the proper and awe-inspiring ceremony of a consultation; the presence of Drs. Belknap or Bonnine from Niles, in Buchanan in frock coat and silk hat was soon noised about and it was but a matter of a few hours when the whole village was appraised of the fact that a consultation was in progress. One doctor in Buchanan always wore the frock coat and topper to uphold the profession in its lofty place and that was Dr. Berrick. The country calls of winter, the hazards of drifted roads, as none were kept open, and frequently a five-mile drive would mean an all-night trip. When such a trip was to beat the stork, the only aseptic precautions were a clean shirt. Very often when there were many country calls the doctor would be gone on his trip for twenty-four hours. It has been a constant wonder in my mind, in comparison with the present day practice of medicine, how they were able to attend to as much as they did. I believe it was the very vicissitudes of their calling which drew these men together in the bygone days and helped to organize for mutual benefit. Today we move so much faster that close co-operation is now necessary to keep abreast of the times, and so it is, that our Society in the past few years has been closely united and free of internal strife.

Three years ago we began the effort which resulted in the State Society choosing to meet in Berrien County in the Twin Cities of Benton Harbor and St. Joseph, firm in the belief that this location is ideal for "Fellowship and Knowledge." We believe you will enjoy your meeting here.

Official Program—110th Annual Meeting, Michigan State Medical Society—Benton Harbor, Mich., Sept. 15, 16, 17, 1930

OFFICIAL CALL

The Michigan State Medical Society will convene in annual session, in Benton Harbor, on September 15, 16 and 17, 1930. The provisions of our Constitution and By-Laws and the official program will govern the business and transactions of this annual session.

J. D. BROOK, *President*
R. C. STONE, *Council Chairman*
H. J. PYLE, *Speaker*.

Attest:

F. C. WARNSHUIS, *Secretary*.

DAILY SCHEDULE

Sept. 14—HOTEL WHITCOMB, ST. JOSEPH.
6:00 P. M.—Meeting of the Council.

Sept. 15—HOTEL WHITCOMB, ST. JOSEPH.
10:00 A. M.—House of Delegates.
2:00 P. M.—House of Delegates.
7:30 P. M.—House of Delegates.

Sept. 16—SONNER HALL, BENTON HARBOR.
9:15 A. M.—Scientific Sections.
1:30 P. M.—Scientific Sections.
7:30 P. M.—First General Session.

Sept. 17—
9:15 A. M.—Scientific Sections.
12:00 M.—Second General Session.
1:30 P. M.—Scientific Sections.

Registration: Sonner Hall.
Scientific Exhibits: Sonner Hall.
Commercial Exhibits: Sonner Hall.

House of Delegates: Meets in Ball Room of Hotel Whitcomb, St. Joseph, on Monday, September 15, at 10:00 A. M.

HOUSE OF DELEGATES

Place: Hotel Whitcomb, St. Joseph.
Time: 10:30 A. M., September 15.
Speaker: H. J. Pyle, Grand Rapids.
Secretary: F. C. Warnshuis, Grand Rapids.

ORDER OF BUSINESS

1. Call to Order.
2. Roll Call and Report of Credentials Committee.
3. Speaker's Address—H. J. Pyle.
4. President's Address—J. D. Brook.
5. Annual Report of the Council—R. C. Stone.
6. Appointment of Reference Committees.
7. Election of Nominating Committee.

NOTE: No two members from one Councilor District shall be elected on the Nominating Committee.

- Duty of Nominating Committee:
- (a) Supervise Ballot for President.
 - (b) Nominate Vice Presidents.

- (c) Nominate A. M. A. Delegates to succeed: C. S. Gosline, J. D. Brook, A. W. Hornbogen, and Alternates J. Wessinger, C. E. Boys and J. G. R. Manwaring.
- (d) Designate place of next Annual Session.

8. Reports of Committees:
 - Medical Education.
 - Public Health.
 - Legislation.
 - Tuberculosis.
 - Civic and Industrial Relations.
 - Medical History.
 - Delegates to the A. M. A.
 - Venereal Prophylaxis.
9. Resolutions and New Business.
10. Recess.

SECOND SESSION

2:30 P. M.

1. Roll Call.
2. Report of Reference Committees.
3. Revision of Constitution and By-Laws.
4. Unfinished Business.
5. New Business.

THIRD SESSION

7:30 P. M.

1. Roll Call.
2. Report of Reference Committees.
3. Report of Nominating Committee.
4. Elections:
 - (a) Vice Presidents.
 - (b) Place of Annual Session.
 - (c) Delegates and Alternates to A. M. A.
 - (d) Councilors:
 - First District
 - Second District
 - Third District
 - (e) Speaker.
 - (f) Vice-Speaker.
5. Unfinished Business.
6. Adjournment.

FIRST GENERAL SESSION

Place: Main Auditorium, Sonner Hall.
Time: September 16, 7:30 P. M.
President: J. D. Brook, Grandville.
Secretary: F. C. Warnshuis, Grand Rapids.

1. Call to Order.
2. Invocation.
3. Welcome—President J. J. McDermot, Berrien County Medical Society.
4. Announcements—The Secretary.
5. In Appreciation—The Council.
6. President's Annual Address—J. D. Brook, Grandville.
7. Address: (Invited Guest)
8. Nominations for President.
9. Resolutions.

SECOND GENERAL SESSION

Time: September 17.
Place: Sonner Hall.

1. Call to Order.
2. Report of Nominating Committee.
3. Introduction of President.
4. Resolutions.
5. Adjournment.

SCIENTIFIC SECTIONS

Section on General Medicine

Chairman: WM. NORTHRUP, Grand Rapids.

Secretary: MILTON R. SHAW, Lansing.

MORNING SESSION

September 16—9:15 A. M.

1. Chairman's Address — Dr. William Northrup, Grand Rapids.
2. "A Survey of the Pollen Situation in Detroit and Its Application in the Treatment of Hay Fever and Asthma"—Dr. George L. Walbott, Detroit.
3. "Therapeutic Application of Ultraviolet Radiation"—Dr. Willis Peck, Ann Arbor.
4. "Bacteriophage in Infectious Disease"—Dr. N. W. Larkum, Lansing.
5. "Diagnosis and Significance of Cyanosis, Hyperpnea and Allied Conditions"—Dr. Plinn F. Morse, Detroit.
6. "Intestinal Disorders: Necessity for Specific Diagnosis and Rational Therapy"—Dr. Elmer L. Eggleston, Battle Creek.

AFTERNOON SESSION

September 16—1:30 P. M.

7. "A Clinical Study of Myxedema in Michigan"—Dr. H. H. Riecker, Ann Arbor.
8. "Diagnosis of Mild Hyperthyroidism"—Dr. William Vis, Grand Rapids.
9. "The Neurological Side of Hyperthyroidism"—Dr. C. D. Camp, Ann Arbor.
10. "Hypometabolism, a Factor in High Blood Pressure"—Dr. Wilbur E. Post, Chicago.
11. "Arterial Hypotension"—Dr. M. A. Mortensen, Battle Creek.

MORNING SESSION

September 17—9:15 A. M.

SYMPOSIUM ON PEPTIC ULCER

Joint Meeting of Sections in Medicine and Surgery

1. "Medical Management of Peptic Ulcer"—Dr. Ralph C. Brown, Chicago.
2. "The Roentgenological Diagnosis of Peptic Ulcer"—Dr. A. W. Crane, Kalamazoo.

(See Surgery Section program for other papers this morning.)

AFTERNOON SESSION

September 17—1:30 P. M.

Election of Chairman and Secretary.

1. "Osteogenic Sarcoma: Report of a Case"—Dr. L. E. Holly, Grand Rapids.
2. "Electrocardiographic Observations on an Exposed Heart, with a Review of Bundle Branch Block Cases"—Dr. Paul S. Barker, Ann Arbor.
3. "Tachycardia"—Dr. Louis M. Warfield, Milwaukee.
4. "Cardiac Pain and Its Differential Diagnosis"—Dr. Hugo A. Freund, Detroit.
5. "Anemia of Nephritis"—Dr. L. E. Verity, Battle Creek.

Section on Surgery

Chairman: WALTER L. FINTON, Jackson.

Secretary: GROVER C. PENBERTHY, Detroit.

MORNING SESSION

September 16—9:15 A. M.

1. Chairman's Address: "The Group Practice of Medicine"—Dr. Walter L. Finton, Jackson.
2. "Chronic Appendicitis"—Dr. Frederick A. Coller, Ann Arbor.
Discussion—Dr. R. C. Stone, Battle Creek; Dr. G. A. Seybold, Jackson.
3. "Gall-bladder Disease, Diagnosis and Indications for Operation"—Dr. Roy D. McClure, Detroit.
Discussion—Dr. C. D. Brooks, Detroit; Dr. Charles E. Boys, Kalamazoo.
4. "Fractures"—Dr. Paul A. Magnuson, Chicago.
Discussion—Dr. F. C. Kidner, Detroit; Dr. F. C. Warnshuis, Grand Rapids.

AFTERNOON SESSION

September 16—1:30 P. M.

5. "Thyroidism with Unusual Clinical Manifestations"—Dr. Max Ballin, Detroit.
Discussion—Dr. Henry J. Vanden Berg, Grand Rapids; Dr. Plinn F. Morse, Detroit.
6. "The Treatment of Acquired Contractures of the Hand"—Dr. Sumner L. Koch, Chicago.
Discussion—Dr. Edward C. Davidson, Detroit; Dr. A. C. Hall, Detroit.
7. "Modern Trend in Anesthesia"—Dr. Frank J. Murphy, Detroit.
Discussion—Dr. Myra E. Babcock, Detroit; Dr. Wm. T. Shannon, Detroit.

8. "Medical Diathermy in Urology"—Dr. Robert McArthur, Detroit.
Discussion—Dr. Alvin Thompson, Flint; Dr. Robert E. Cumming, Detroit.

MORNING SESSION

September 17—9:15 A. M.

JOINT MEETING OF MEDICAL AND SURGICAL SECTIONS

Symposium on Duodenal and Gastric Ulcer

1. "The Cause and Control of Gastric Acidity"—Dr. George W. Crile, Cleveland.
2. "Medical Management"—Dr. Ralph C. Brown, Chicago.
3. "Roentgenological Diagnosis"—Dr. A. W. Crane, Kalamazoo.
4. "Surgical Management"—Dr. E. Starr Judd, Rochester.
5. "Marginal Ulcer"—Dr. Norman M. Allen, Detroit.

AFTERNOON SESSION

September 17—1:30 P. M.

Election of Officers.

1. "End-Results in Cancer"—Dr. Richard R. Smith, Grand Rapids.
Discussion—Dr. C. W. Halliday, Detroit; Dr. Harry C. Saltzstein, Detroit.
2. "Intestinal Obstruction"—Dr. Harry B. Knapp, Battle Creek.
Discussion—Dr. J. G. Manwaring, Flint; Dr. Wm. R. Clinton, Detroit.
3. "The Management of Filiform Strictures and Their Complications"—Dr. Reed M. Nesbit, Ann Arbor.
Discussion—Dr. Harry W. Plaggenmeyer, Detroit; Dr. Wm. J. Butler, Grand Rapids.

Section on Gynecology and Obstetrics

Chairman: HAROLD HENDERSON, Detroit.
Secretary: HARRY M. NELSON, Detroit.

MORNING SESSION

September 16—9:15 A. M.

1. "Sterility: Its Management in an Organized Clinic"—Alexander Campbell and J. Duane Miller, Grand Rapids.
2. Title to be announced—Dr. Wilkins, Ann Arbor.
3. Title to be announced—Clarence E. Toshack, Saginaw.
4. "The Use of X-ray in Obstetrical and Gynecological Diagnosis"—Irving F. Stein, Chicago.

AFTERNOON SESSION

September 16—1:15 P. M.

1. "Ascheim-Zondak Test for Pregnancy"—Harold Mack, Detroit.
2. "Relation of Pelvic Inclination and Lumbar Index in Obstetrics"—Cleary Swanson, Detroit.
3. "Atrophic Vulvitis and Cancer of the Vulva"—M. Smeltzer and H. M. Nelson, Detroit.
4. "Diagnosis of Contracted Pelvis"—David S. Hillis, Chicago.

MORNING SESSION

September 17—9:15 A. M.

1. "Use of Avertin in Obstetrics and Gynecology"—J. M. Pierce, Ann Arbor.
2. "Dermoid Cysts of the Ovary"—Harold Furlong, Pontiac.
3. Title to be announced—Carey Culbertson, Chicago.
4. "Trichomonas Vaginalis Infection of the Vagina"—George Kamperman, Detroit.

AFTERNOON SESSION

September 17—1:15 P. M.

Election of Officers.

1. "Eclampsia, A Preventable Disease"—E. B. Anderson, Grand Rapids.
2. Title to be announced—Paul W. Willets, Grand Rapids.
3. Title to be announced—F. H. Falls, Chicago.

Section on Pediatrics

Chairman: T. D. GORDON, Grand Rapids.
Secretary: JOHN PARSONS, Ann Arbor.

MORNING SESSION

September 16—9:15 A. M.

1. "Behavior Disorders in Childhood and the Relation to the Pediatrician"—Dr. Louis A. Schwartz, Director Clinic for Juvenile Research, Detroit.

Brief discussion of the history and newer aspects of mental hygiene. In our Detroit Clinic for Juvenile Research, Yale University, we are endeavoring to correlate and evaluate the sociological, familial, physical, laboratory, psychological and neuro-psychiatric findings in a series of young, delinquent children, who are being studied over a five-year period, in order to determine some of the underlying mechanisms of conduct.

2. "Behavior Problems in School Children"—Willard C. Olson, Associate Professor of Education, and Director

of Research in Child Development, University of Michigan, Ann Arbor.

The paper will be concerned with the discussion of some of the common conduct disorders and nervous habits in children and their relation to such factors as age, sex, intelligence, school achievement, family history, habit formation, nutritional status, fatigue and imitation. The topic will be introduced by a brief account of the program in child development being initiated by the University of Michigan.

3. "Child Guidance"—Dr. Leo Henry Bartemeier, Detroit.

Practical experiences of a psychiatrist working with a group of Pediatricians on a consultation basis over a period of six months; nature of problems encountered; methods employed and therapeutic results obtained from said procedure.

4. Title to be announced—Orus Ray Yoder, M.D., Assistant Superintendent Kalamazoo State Hospital, Kalamazoo.

AFTERNOON SESSION

September 16—1:30 P. M.

1. "Tuberculosis in Children"—Dr. Henry D. Chadwick, Detroit.

The type of disease as shown in infants and very young children reveals the evolution of the disease from the very early to the later phases showing partial healing by fibrosis and calcification. The different phases are illustrated by lantern slides.

A discussion of the type of cases that should have special treatment.

2. "The Diagnosis and Treatment of Pulmonary Tuberculosis in Childhood"—Dr. Daniel Budson, Ann Arbor.

A consideration of experiences with tuberculosis in childhood at Dr. Armand-Delille's Clinic in Paris. Early lesions in childhood and methods of diagnosis. Discussion of his treatment.

3. "Specific Infections of Infancy and Childhood"—Dr. Isaac A. Abt, Professor of Pediatrics, Northwestern University, Chicago.

4. "Diagnosis and Treatment of Acute Osteomyelitis in Children"—Dr. Grover C. Penberthy, Associate Professor of Surgery, Detroit School of Medicine.

Brief discussion of the usual history presented by these patients with a review of the incidence of this disease in different classes of children. A practical plan for working out the diagnosis and careful consideration of the treatment.

MORNING SESSION

September 17—9:15 A. M.

1. "Chronic Nephritis in Children"—Dr. M. Cooperstock, Ann Arbor.

Discussion of the various types and frequency of chronic nephritis in children. Comparison with the chronic nephritis of adults. Consideration of some of the outstanding clinical features of chronic nephritis with special reference to

the significance of certain related alterations in the blood chemistry.

2. "Kidney Functional Test"—Dr. Floyd H. Lashmet, Ann Arbor.

This paper will be concerned with a discussion of the various types of kidney functional tests and their evaluation. Description of the technique used in our clinic.

3. "Acidosis, Alkalosis and Dehydration"—Dr. Alexis F. Hartman, Associate Professor of Pediatrics, Washington University, St. Louis, Mo.

The chemical composition of the body fluids and the normal means of their maintenance are illustrated. The effects of various abnormal conditions which lead to dehydration with acidosis or alkalosis are then discussed. A simple rational means of therapy is then presented.

4. "Diagnosis and Treatment of Common Skin Diseases in Childhood"—Dr. Clark W. Finnerud, Assistant Clinical Professor of Dermatology, University of Chicago, Chicago.

This paper will include discussion of eczema, seborrheic dermatitis, impetigo, scabies, ringworm, birthmarks and other affections.

AFTERNOON SESSION

September 17—1:30 P. M.

Election Chairman One Year.

1. "The Prevention of Rickets in Premature Infants by Use of Viosterol"—Dr. Earl W. May, Detroit.

It is clearly demonstrated in this paper that rickets can be prevented in premature infants by the use of Viosterol if dosage is sufficient. The material in this paper covers 1½ years' work on a large series of cases that has been checked clinically and through blood chemistry studies and X-ray.

2. "Clinical Use of Viosterol"—Dr. Henry G. Poncher, Chicago.

In our work we have established a daily minimum prophylactic dose for the average normal infant from birth to one year. Premature and rapidly growing infants demanded special consideration.

3. "Relation of Diet to Dental Caries"—Dr. R. W. Bunting, Professor of Oral Histology and Pathology, School of Dentistry, Ann Arbor.

This paper will be a review of the recent experimental work that has been done by several different groups on the relation of diet to the decay of teeth. An analysis and review of the work of May Mellanby, Sherman Davis and M. T. Hanke will be given and the results of a feeding experiment which we ourselves have conducted, including over 400 children in whom dental decay was almost entirely eliminated over a period of one year.

4. "Report of a Case"—Dr. Elmer L. DeGowin, Ann Arbor.

Anaphylactic shock following tetanus antitoxin given in small and divided doses. Brief review of the literature.

Section on Ophthalmology and Otolaryngology

MORNING SESSION

September 16,—9:15 A. M.

Round Table Conferences:

Eye Section: Dr. Harry Gradle, Chicago
Ear, Nose, Throat Section: Dr. A. C. Furstenberg, Ann Arbor

AFTERNOON SESSION

September 16—1:30 P. M.

1. Chairman's Remarks.
2. "A Statistical Analysis of Ophthalmic Patients"—Dr. Harry Gradle, Chicago.
Discussion opened by: Dr. Parker Health, Detroit; Dr. John R. Rogers, Grand Rapids.
3. "Carcinoma of Larynx"—Dr. A. C. Furstenberg, Ann Arbor.
Discussion opened by: Dr. James T. Mills, Grand Rapids; Dr. Don M. Campbell, Detroit.
4. "Anesthesia in Head and Neck Surgery: Various Types and Methods"—Dr. Reuben Maurits, Grand Rapids.
Discussion opened by: Dr. Chas. W. Ellis, Lansing; Dr. A. R. McKinney, Saginaw.
5. "Hysterical Mastoiditis"—Dr. Carl McClelland, Detroit.
Discussion opened by: Dr. C. T. Proutt, Detroit; Dr. Emil Amberg, Detroit.

MORNING SESSION

September 17—9:15 A. M.

Round Table Conferences:

Eye Section: Dr. Walter Parker, Detroit
Ear, Nose, Throat Section: Dr. Samuel Iglauer, Cincinnati

AFTERNOON SESSION

Election of Chairman and Secretary

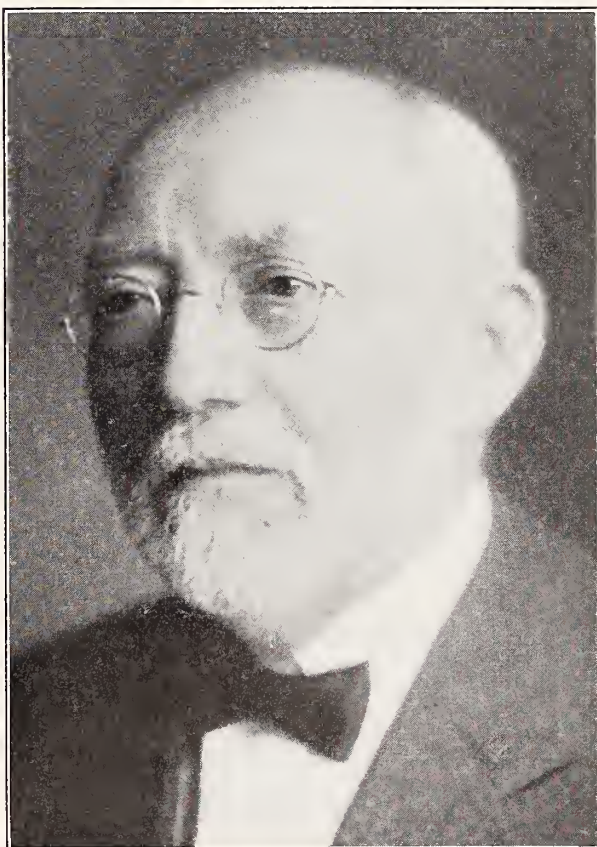
1. "Deep Suppuration in the Pharynx and Neck as it Concerns the Laryngologist"—Dr. Samuel Iglauer, Cincinnati.
Discussion opened by Dr. Neil I. Bentley, Detroit; Dr. Carl G. Wencke, Battle Creek.
2. "Detachment of the Retina"—Dr. Walker Parker, Detroit.
Discussion opened by: Dr. Dean W. Meyers, Ann Arbor; Dr. Howell L. Begle, Detroit.
3. "Iodized Oil Injection into the Sinuses"—Dr. E. L. Whitney and Dr. H. P. Doub, Detroit.
Discussion opened by: Dr. Robert H. Fraser, Battle Creek; Dr. Wm. E. McGarvey, Jackson.
4. "Radical Surgery of the Frontal Sinus"—Dr. H. O. Westervelt, Benton Harbor.
Discussion opened by: Dr. Ferris Smith, Grand Rapids; Dr. J. K. Heckert, Lansing.

The mind, the intelligence of man, is a visible brain; what you hear is largely gossip; what you smell isn't always pleasant and what you taste may be perverted. But after all, you can get certain things that you can reach with your hands but the progress of medicine has been visual because the brain is visual.—Dr. William J. Mayo.

SOCIETY ACTIVITY

FIFTY YEARS OF SERVICE: JOHN VANDERLAAN

Midst the reflection of golden yellow, typifying the harvest's richness, the medical profession of Muskegon and vicinity recorded their tribute to their fellow member, Dr. John Vanderlaan. The revered doctor has served his fellowmen over a period of fifty years.



DR. JOHN VANDERLAAN

As an anniversary celebration of his fiftieth year of service in public life Dr. Vanderlaan was honored at dinner given at the Hackley Hospital dining room at noon today with members of the hospital staff, the board of trustees, the board of education, and friends hosts for the occasion.

Dr. F. W. Garber, Sr., presided as chief of staff at Hackley Hospital, an office that was first held by Dr. Vanderlaan, and presented to the honor guest the gift which expressed the admiration and respect of those who have been associated with him. Toasts were given by C. W. Marsh, representing the board of education, on which Dr. Vander-

laan has served for thirty-eight years, eighteen of which he has been president; and by Dr. Archibald Hadden, president of the board of trustees of the hospital, and by Dr. George L. LeFevre, chairman of the board of the Hackley Union National Bank, of which Dr. Vanderlaan is vice president. Dinner invocation was pronounced by Rev. Henry Veltman, pastor of the Central Reformed church, attended by Dr. Vanderlaan.

On the frontispiece of the booklet which was presented Dr. Vanderlaan are written in illuminated gold lettering done by hand these words:

John Vanderlaan, A.M., M.D.
Well Loved Physician
Wise Counselor
Educator
Friend

A short text also in hand lettering of a beautiful medieval print beautifully expresses the sentiment of his colleagues. It follows:

"For half a century he has lived among us as an example of that fine type of professional manhood attained by the physician devoted to the high ideals of his calling.

"Unattracted by the insistent calls of a growing commercialism, he has held steadily to the primal purpose of his calling—reverent service to the sick and to the suffering, and a constantly increasing knowledge of how to serve. He has been quick to know the value of the new and to make it the servant of the old.

"The work done by him in the pre-hospital days, based as it was on his deep knowledge of the underlying and unchangeable principles of asepticism and wound healing, would do credit to the best of today.

"His interest in the development of Muskegon hospitals was keen and his aid invaluable.

"It is a privilege and a stimulus to high endeavor to be the associates of this modest, kindly and scholarly gentleman, and we have a very real pleasure in thus attesting our friendship and our great regard for him."

The script is autographed by members of the board of education, the hospital staff, and the board of trustees who have known him during his years of service.

The dinner appointment carried out the anniversary observance with individual cakes bearing lighted candles in shades of golden yellow, American beauty roses beau-

tifying the tables, where covers were laid for 80 guests.

The felicitations and good wishes of the profession were conveyed to the doctor in a telegram that was read at the dinner.

F. C. W.

ANNUAL MEETING—BENTON HARBOR-ST. JOSEPH—Sept. 15-16-17

Many factors made it absolutely impossible to publish all of the preliminary program in this issue. The complete program will appear in the September issue. The assurance is given that a most educational program, with many distinguished speakers, is in preparation. It is a program that merits a large attendance, for it will be of intense value to every member. Note the dates and plan to attend. Write for your hotel reservations today. A list of hotels will be found in this issue.

F. C. W.

ENTERTAINMENT PROGRAM OF MICHIGAN STATE MEDICAL SOCIETY ANNUAL MEETING

Benton Harbor and St. Joseph
September 15, 16 and 17
For Women
Monday

Morning—Reception of wives of Delegates at Hotel Whitcomb in St. Joseph.

Afternoon—Courtsey rides through Fruit Belt, House of David and along Lake Michigan. Golf for women at Berrien Hills Country Club. Informal bridge tables in Hotel Whitcomb gardens.

Evening—Bridge party, Lobby of Hotel Whitcomb. Dancing in Outdoor Ball Room of Hotel Whitcomb (Regular Whitcomb Dance Program).

Tuesday

1:00—Luncheon and Bridge, Berrien Hills Country Club.

4:45—Excursion Ride on Lake Michigan. Large Goodrich passenger ship.

Evening—Special Show, Liberty Theater, Benton Harbor.

Wednesday

10:30 A. M.—Special Style Showing, courtesy Shepard & Benning, St. Joseph.

11:30 A. M.—Courtsey rides through the Fruit Belt for those missing out on Monday.

Courtesy cars will be provided at all times

for the visitors and special privilege placards provided for all cars. Special trips will be arranged for those who wish, and open privileges for golf fans at all hours at the Berrien Hills and Twin City Golf Courses. Information and registration booths will be maintained at the Whitcomb Hotel in St. Joseph and Sonner Hall in Benton Harbor. The bridge prizes will be worth playing for, and the Berrien County women, under the leadership of Mrs. Henry Bartlett of St. Joseph, promise to keep every woman visitor entertained from the time she arrives until departure.

Husbands will not have to worry about their wives' transportation or entertainment once they are registered.

For Men

Monday

Evening—Smoker and luncheon for officers and members of House of Delegates.
Hotel Whitcomb.

Tuesday

4:45 P. M.—All who wish may go on the excursion ride on Lake Michigan. A large Goodrich passenger ship will make about an hour's trip out in the lake.

For the golf bugs the Berrien Hills Country Club and the semi-public Twin City Golf Course and Martin Hills Club will be available at all times.

Those who wish amusement will find the Silver Beach Amusement Park a short walk from the Hotel Whitcomb. All the rides, dancing, etc. Visits may also be made to the House of David Amusement Park and the Zoo in Benton Harbor.

Monday, Tuesday and Wednesday there will be Courtesy Cars available in the late afternoon for rides through the Fruit Belt, or you can join the procession with your own car.

The Chambers of Commerce will provide small baskets of Berrien County fruit on Tuesday and Wednesday for souvenir gifts.

Special Privilege placards will be given to all who wish them when they register. Cars provided with these signs will be given extra consideration by the police of the Twin Cities. Garages are available near every hotel and a list will be sent out by the Chambers of Commerce.

Boy Scout guides will be available on Monday and Tuesday.

Physicians who wish to bring their wives

can park them with the Ladies Entertainment Committee until ready to leave for home and we will promise you that there will be no excuse on their part if they complain of being left to shift for themselves.

HOTELS—ANNUAL MEETING

Benton Harbor

Hotel Vincent.....	\$2.50 single to \$12 double
Hotel Premier	\$2.00 single and up
Hotel Michigan	2.00 single and up
Hotel Dwan	2.00 single and up
Hotel Benton	2.00 single and up
Hotel Fastland	1.50 single and up

St. Joseph

Hotel Whitcomb—

\$2.50 single and up to \$12.00 double

Hotel Dennis—

\$2.50 single and up to \$10.00 double

Hotel Lakeview—

\$2.00 single and up to \$8.00 double

Edgewater Beach Hotel—

\$7.00 per day American plan.

Above listed hotels are sufficient to accommodate all of the physicians and their wives who might attend. There are many others not listed because not first class, year around hotels but are available if necessary.

Hotel Whitcomb is to be headquarters in St. Joseph and Hotel Vincent in Benton Harbor.

Reservations may be sent direct to hotels or to the Berrien County Medical Society. A Hotel Committee has been appointed to see that all reservations are taken care of and communications may be addressed to Dr. F. J. Witt at St. Joseph or to the Secretary, Dr. W. C. Ellet of Benton Harbor.

F. C. W.

A. M. A. SESSION—DETROIT

Every doctor attending the Detroit session has formulated his opinion of the value of attendance. This comment is solely for the purpose of record, also to set forth certain activities.

Sufficient praise and commendation cannot be accorded to the Detroit profession and the local committee on arrangements. For months did they labor to perfect the details. The thoroughness of their efforts was ever apparent during the session. Their financial contribution exceeded \$22,000.

They deserve our hearty thanks. We are all proud of them.

On Sunday, June 22, the Board of Trustees held their meeting on board of Mr. Oakman's private yacht. This was secured through the efforts of Dr. Angus McLean. The trustees transacted their business as a trip was run to Marine City, returning at 5:30 P. M. A most delightful lunch was served by our host.

On Monday evening, June 23, the Officers, Council and members of our State Society tendered a dinner to the Officers, Trustees and House of Delegates of the A. M. A. at the Detroit Yacht Club. As guests of honor we had the Ex-Presidents of the A. M. A. who were in attendance.

Our guests were transported to the Club at 5:00 P. M. On arrival they were escorted to boats and given a ride around the island and a view of Detroit's waterfront. Promptly at seven they were seated in the Club's beautiful dining room where a well balanced menu was served. At 8:30 President Brook introduced Dr. C. G. Jennings as toastmaster. Dr. Jennings was in a happy mood and pleasingly introduced the Ex-Presidents, who were called upon to relate the incident in their lives that exerted the greatest influence. It was a most delightful treat to listen to these distinguished men, all of whom have made epochal contributions to American medicine. Our reporter's notes of the incidents related will be published in a subsequent issue. Our guests were returned to their hotels at 11:30 P. M., and many were the expressions of a delightful evening.

The General Session, the President's Reception, the entertainment for the ladies were functions that must have created favorable impressions.

The House of Delegates transacted a large volume of business. Its proceedings will be published in the Journal of the A. M. A. and be reported upon by our delegates at the September meeting.

The Officers elected were: President-Elect, E. Starr Judd, Rochester, Minnesota; Vice-President, L. J. Hirschman, Detroit; Speaker, F. C. Warnshuis, Grand Rapids; Secretary, Olin West, Chicago; Treasurer, Austin Hayden, Chicago. Philadelphia was selected as the place for the 1931 session.

F. C. W.

MICHIGAN STATE BOARD OF REGISTRATION IN MEDICINE

Semi-Annual Meeting Held at Ann Arbor, Michigan,
at 6:30 P. M., June 11, 1930

Present: Drs. McLaughlin, Kelly, Marshall, Brook, Lemire, McIntyre, Tew, Teifer, English, Yeomans.

Absent: None.

The meeting was called to order by the President; Dr. Nelson McLaughlin, President, in the Chair.

The minutes of the last meeting were read by the Secretary. No objection being raised, the Chairman declared the minutes of October 9, 1929, and January 6, 1930, adopted as read.

SECRETARY'S REPORT

Gentlemen:

Immediately after being honored by being elected as Secretary of your Board, I assumed the secretarial duties and responsibilities. In this report I shall endeavor to impart a general summarization of my executive activities:

1. OFFICES: The lease on the offices in the Stroh Building expired on November 1, 1929. More suitable offices were found in the Maccabee Building. By authority of the President and the State Administrative Board, the Board's offices were moved to the Maccabee building on December 1, 1929. The rental is the same as was paid in the Stroh Building.

2. NEW LICENSE CERTIFICATES: In accordance with the action of the Board, a new license form was devised. The form was approved by the Attorney General and the Board at its special meeting in January.

3. RULING BY ATTORNEY GENERAL: Several interviews have been had with the Attorney General and he has been communicated with frequently in regard to legal authority and scope of the Board's activities. These opinions have been forwarded to members for their information. Personally, your Secretary is not in accord with the ruling made on Section 3, Subdivision 6th. I purpose to press further for an amended opinion that will permit the Board to exercise suspension power.

4. STATE CONSTABULARY: Interviews and correspondence have been had with the Commanding Officer of the State Constabulary. Three cases were referred for investigation, with the result that two violators have left the state and one is waiting trial.

Through the influence of Dr. McIntyre, each member of the Board has been appointed a Special Police Officer.

5. COMPLAINTS: Complaints were received and action taken as indicated in the following cases:

(1) Dr. ———. Citizens complained of habitual drunkenness. Cited to appear before a Special Committee of the Board and placed on probation. Final disposition to be made at the June meeting.

(2) Dr. Joseph H. Hanson, Detroit. Citizens complained of violations of Section 3, Subdivision 6th. Cited to appear before President and Secretary and license suspended temporarily. Authority to suspend temporarily questioned and Hanson has continued his practice. Several witnesses have filed additional complaints, including the Veterans of Foreign Wars.

(3) Dr. Alex H. Pearson, Ann Arbor. Complaint of illegal association made by the Washtenaw County Medical Society. Cited to appear at June meeting.

(4) Dr. ———. Petition and complaint signed by citizens charging habitual drunkenness. Placed on probation and cited to appear at June meeting.

(5) Dr. Bion Whelan, Hillsdale. Convicted in U. S. District Court, Detroit, on narcotic charges. Sentence suspended on condition that he would cease practice. License temporarily suspended and cited to appear at June meeting.

(6) Dr. ———. Convicted in Circuit Court, on a bribery charge. License suspended and later, on request of Governor Green, the suspension was withdrawn. Cited to appear at June meeting.

(7) Dr. ———. Convicted in U. S. Court and sentenced to Leavenworth, on a narcotic charge. Suspended and cited for June meeting.

(8) Dr. ———. Has large sign "Public Health Clinic," which is misleading to the public. Is associated with an osteopath and chiropractor. Complaint by Wayne County Medical Society. He appeared before the Secretary and agreed to remove the sign. The matter will be referred to the Board at the next meeting for further action.

(9) Dr. ———. Cited for circularizing cards with grossly improbable statements. He has agreed to discontinue the use of these advertising cards.

(10) Dr. ———. Complaint made that he is promising to cure cancer with a paste. He was cited to appear before the Secretary and agreed to withdraw his claims.

(11) Mrs. ———. A midwife, licensed by the Detroit Board of Health. It was charged that she was practicing medicine without a license but upon investigation the charges were found to be untrue.

(12) ———. A registered optometrist, charged with practicing medicine. He was cited to appear before the Secretary, interviewed, and promised to discontinue medical practice.

(13) Narcotic convictions: Five copies of certificates of convictions have been secured from the Federal Court for Board action in June.

(14) B. C. Smith, Detroit. A registered drugless practitioner. Uses a radio machine for treating disease. He was interviewed and promised to discontinue the use of the machine if it was proven valueless.

(15) Dr. ———. A registered osteopath. Served an internship in a Lansing hospital and practiced as a medical man for a short period. Upon investigation he left the state. A classmate of his also served an internship, as above, and practiced at Pigeon as a medical man until an investigation discontinued his medical work.

6. ADMINISTRATION REGULATIONS: The minutes of the Board for the past fifteen years have been reviewed. A compilation of regulations has been made and is submitted for approval.

7. INTERN CURRICULUM: A schedule of required intern work has been formulated and is submitted for approval.

8. WAYNE COUNTY: Numerous interviews have been had with committees and officers of the Wayne County Medical Society, Commissioner of Health, County Prosecutor and Police Commissioner, relative to violations and illegal practice. As a result I am able to report a working plan of concerted action on the part of the Police, Prosecutor, County Society and Major Roehl, of the Detroit Department of Health. Under this plan, several arrests have been made.

9. EXAMINATIONS: I believe the Board will find, as a result of correspondence with the two medical schools, that more satisfactory arrangements have been made for the examinations. A new set of examination rules has been compiled.

10. DETROIT OFFICE: Your Secretary has spent at least one day per week in the Detroit office. During these visits many interviews were had with individuals regarding Michigan licensure.

11. SPECIAL EXAMINATIONS: By direction of the Board, a special examination was conducted in January and four applicants were examined.

12. FEDERATION OF STATE MEDICAL BOARDS: Your Secretary attended the Annual Conference in Chicago, during February, of the Federation of State Medical Boards of the United States.

By motion, the Secretary's report was accepted as read.

Re: Intern Curriculum.

By Dr. McLaughlin, seconded by Dr. Teifer:

RESOLVED, that the Curriculum of Intern Work, as submitted by the Secretary, be adopted as a standard by this Board.

Yeas, 10; nays, 0. Motion carried.

TO: Superintendent and Chief of Staff

of hospitals approved for internship by the Michigan State Board of Registration in Medicine.

CURRICULUM OF INTERN WORK (effective July 1, 1930):

I. By action of this Board, on and after July 1, 1930, the requirements set forth in Section III of this regulation will become effective.

II. This Board will require that each candidate for a Michigan license must present a certified statement from an approved hospital that he has satisfactorily completed this curriculum of work during his twelve months of service as an intern.

III. Each approved hospital shall provide for and require of each intern during his twelve months of residency, the following work:

- | | |
|--|------------|
| (A) MEDICINE..... | Six months |
| 1. General | 2 months |
| 2. Pediatrics | 2 months |
| 3. Bacteriological and
pathological laboratory..... | 1 month |
| 4. Out-patient clinic..... | 2 months |
| 5. X-ray department..... | 1 month |
| Comment on work in this division:..... | |
| (B) SURGERY..... | Six months |
| 1. Emergency accidents..... | 4 weeks |
| 2. Eye, ear, nose and throat..... | 4 weeks |
| 3. Obstetrics:
(Deliveries—8)
(Present at—25 deliveries) | |
| 4. General surgery..... | 8 weeks |
| 5. Anesthetics | 1 month |
| Comment on work in this division:..... | |

NOTE: Subdivisions of each major division (A and B) may be served jointly.

(C) Each intern shall during the year report at a general staff meeting on either
(a) a study of any group of hospital cases, or
(b) a report of research work done in the hospital.

(D) Rating on history writing:.....
75 to 100%

(E) Personal rating:.....
(A-B-C-D)

- Personality
- Character
- Temperament
- deportment
- Executive ability

When an intern has completed his hospital year, the Superintendent and the Chief of Staff shall certify in writing to this Board that he has conformed to the foregoing schedule. The certification shall consist of the itemization imparted in Section III.

By action of the Board.

NELSON McLAUGHLIN, M.D., *President*
F. C. WARNSHUIS, M.D., *Secretary.*

Re: Approved Hospitals.

By Dr. Tew, seconded by Dr. Kelly:

RESOLVED, that the matter of approved hospitals be referred to a Committee on Inspection of hospitals to be appointed by the President.

Yeas, 10; nays, 0. Motion carried.

Re: Legislation.

By Dr. Kelly, seconded by Dr. Lemire:

RESOLVED, that the President appoint a committee to confer with the Attorney General on pending legislation, and to report at the October meeting of the Board.

Yeas, 10; nays, 0. Motion carried.

Re: Administration Rules.

By Dr. McLaughlin, seconded by Dr. Lemire:

RESOLVED, that the Administration Rules, as submitted by the Secretary, be adopted as a standard by this Board.

Yeas, 10; nays, 0. Motion carried.

ADMINISTRATION RULES (Revised 1930)

1. Applicants for a Michigan license must fulfill the following requirements:
 - (a) Graduate of high school and at least two years of college grade work in specified subjects.
 - (b) Graduate of Class "A" medical school.
 - (c) Pass the written examination of the Board.
 - (d) One year of rotating internship in an approved hospital.
 - (e) Conform to provisions of Act 237, as amended.
2. Written examinations will be conducted by the Board in June at ANN ARBOR and Detroit; in October at Lansing. Dates to be determined yearly by the Board.
3. Applicants for a Michigan license by indorsement of qualifications or license issued by another state:
 - (a) Submission of qualifications upon the application blanks of this Board.
 - (b) Must have practiced at least one year in the state whose license is submitted for indorsement.
 - (c) Meet the Board's educational requirements.
 - (d) Conform to provisions of Act 237 as amended.
4. Applicants for a Michigan license by indorsement fully complying with the Board's requirements will be issued a license by the Secretary at any time during the year.
5. Applicants whose qualifications are deficient shall not receive a license until their individual case is reviewed by the Committee on Registration and Standards and their report acted upon at a session of the Board.
6. Special examination shall not be given unless authorized by a vote of the members, either at a meeting of the Board, or upon direction of the President that a mail vote may be taken authorizing a special examination.

- Yeas, 10; nays, 0. Motion carried.

Complaint filed by Mr. A. Klette, 5893 Hazlett Avenue, Detroit, stating that Dr. Hanson promised to cure his son of dementia praecox for the sum of \$500.00. This amount

to be paid \$250.00 down and the balance at a later date. After 20 months' treatment the boy was unimproved and upon Dr. Hanson's demand for more money, Mr. Klette came to the Board for advice, and filed a sworn statement regarding the facts in the case, which is as follows:

"I, A. Klette, of 5893 Hazlett Avenue, Detroit, Michigan, being duly sworn, depose and sayeth that I am a resident of the City of Detroit and have been for all of my life; that I am married and have a son by the name of Donald, whose age is twenty-one years. That this son at the age of sixteen years evidenced a mental derangement for which he has been examined and treated by a number of doctors, all of whom have made a diagnosis of dementia praecox. That my son Donald was in the Psychopathic Hospital of the University of Michigan, in Ann Arbor, for five months, in the summer of 1924, and later was confined in the Michigan State Hospital, at Pontiac, Michigan, since which time he has been in a private sanitarium in Detroit, and in all of these institutions the diagnosis was confirmed as dementia praecox.

I further state that in April, 1928, I was induced to see a certain Dr. Joseph H. Hanson, at 2903 Cadillac Avenue, Detroit, and that my son was examined by this Dr. Hanson, after which he told me that he would bring him back to a perfect mental state and that he proposed to do this by the administration of serum and certain liquid medicines, and that he agreed to do this for a total payment of five hundred (\$500.00) dollars,—two hundred fifty dollars to be paid down and the balance in partial payments, at some future date. He also stated that the reason for this seemingly excessive charge was that he obtained the serums from foreign countries, which made their cost almost prohibitive. For this amount of money he assured me that my son would be completely cured. I then placed my son in Dr. Hanson's care, after paying him the sum of two hundred fifty dollars, and Dr. Hanson treated him by the administration of serum and liquid medicines. He assured me that this medicine would drive the pus out of the dead brain, destroy the sympathetic nerves, and so build up the smaller brain, and in this way would cure him. My son went to him twice a week over a period of approximately twenty months and recently Dr. Hanson demanded a new financial arrangement and again stated, in January, 1930, that he would cure my boy. I was further assured by Dr. Hanson that the boy would be quite safe, and that under this advice I took my son home. When he had been there but a short time he had a violent outburst, attacked his mother, and permanently injured her.

(Signed) Anthony Klette.

Subscribed and sworn to before me,
F. C. Warnshuis, Secretary,
this 20th day of January, A. D. 1930."

Another complaint was filed by Mrs. Harry Upell, 14041 Freeland Avenue, stating that she had paid Dr. Hanson \$325.00, with no results. Mrs. E. J. Dwyer, 11617 Indiana Avenue, also filed a complaint against Dr. Hanson's method of practice. Both women stated that Dr. Hanson had told them that "he taught in the University of Michigan Medical School, and that he had many patients in the University Hospital, at Ann Arbor; that (he had office hours on three days a week) on other days he was busy with his patients in the University Hospital, and Harper and Grace Hospitals, Detroit; that the University send him many patients which they are unable to treat.

Another complaint was filed by C. E. Buchanan, 704 E. Jefferson Avenue, Detroit, a disabled army veteran, suffering from sleeping sickness. He stated that Dr. Hanson claimed he would cure him for \$375.00 (with \$175.00 down) and endeavored to obtain this amount from the U. S. Veterans Bureau.

Another complaint was filed by the mother of Mary Saunders, Highland Park (telephone Hemlock 3480-J), stating that she had paid Dr. Hanson \$295.00; that Dr. Hanson treated this young woman for one and one-half years and discharged her as cured of syphilis. The symptoms re-appearing, she went to a public clinic, where her tests were found to be positive, with no indication that proper medical treatment had ever been given her. Dr. Hanson promised to return her money but failed to do so. The girl's mother called upon many patients of Dr. Hanson and her investigations seemed to indicate that Dr. Hanson was employing "cappers" to obtain patients for him from various sections of the city and state, although definite proof was lacking. Among the patients she interviewed was one Mollie Olshansky, 9745 McQuade Avenue, Detroit (Garfield 6591-M), who stated that she had paid Dr. Hanson \$200.00 and treated two years without result. Upon their complaint Dr. Hanson promised to return their money but did not do so until members of her family "beat him up," when he returned \$175.00.

Mary Saunders is now in Columbus, Ohio, and is being treated for syphilis by Dr. Hugh Baldwin, according to her mother's statement.

Other complaints too numerous to mention are on file in the office of the Secretary of the Board; in the Detroit Board of Health offices; and in the office of the Prosecuting Attorney of Wayne County.

A notice was served upon Dr. Hanson, May 23, 1930, by registered mail, requiring him to appear at the Board meeting, June 11, 1930, to show cause why his license should not be revoked.

The provisions of Act 237, P. A. of 1899 as amended, having been complied with and Dr. Hanson having received by registered mail a notice to appear before the Board of Registration in Medicine to show cause why his license should not be revoked, the Board proceeded with an open hearing and after due review of the evidence presented and careful deliberation, took such action as is hereby indicated:

Cited to appear, May 20, 1930, and registered return card dated May 23, 1930.

CHARGES: Several affidavits and statements were presented to the Board from individuals charging and evidencing a violation of Section 6 of Article 3 of Act 237. Accused appeared in person and with his attorney, and was given ample opportunity to present to the Board such statements, evidence and witnesses as to why he was not guilty of the violations as charged.

ACTION: Upon termination of the open hearing, the Board went into executive session. After careful weighing and reviewing the evidence presented, the finding of the Board of Registration in Medicine was that Dr. Hanson had been guilty of grossly unprofessional and dishonest conduct, obtaining fees on the assurance that an incurable disease could be permanently cured, making grossly improbable statements, and violating the various provisions of subsection 6 of Section 3, of the Medical Practice Act.

Thereupon, on motion of Dr. McIntyre, supported by Drs. Brook and Tiefer, that the License No. 6198, issued to Dr. Joseph Henry Hanson, on May 17, 1906, be revoked and that the Secretary notify by registered mail the said Dr. Joseph Henry Hanson, and that said revocation shall become effective at noon on the 14th day of June, A. D., 1930, and that the fact of such revocation shall be so recorded by the Secretary.

Yeas, 10; nays, 0. Motion carried.

Copy of notice sent Dr. Hanson:

TO:
Dr. Joseph Henry Hanson,
2903 Cadillac Blvd.,
Detroit, Michigan.

Sir:
Following your hearing held in Ann Arbor, on June 11th, 1930, the finding of the Board of Registration in Medicine was that you were guilty of violating the provisions of Act 237, Public Acts of 1899, as amended.

Therefore, be now advised, that the Board of Registration in Medicine, in compliance with the provisions of Act 237 as amended, permanently revoked license, or certificate of registration, numbered 6198, and issued to you under date of May 17, 1906.

This revocation is effective at noon of the fourteenth day of June, A. D. 1930.

MICHIGAN STATE BOARD OF REGISTRATION IN MEDICINE.
By: F. C. WARNSHUIS, Secretary.

Dated at Detroit, Michigan,
June 13, 1930.

Re: Sidney H. Culver, Mason, Michigan.

Graduate of University of Michigan, 1886. Licensed in Michigan, January 26, 1900, upon the basis of credentials. Practiced in Mason since that time.

Dr. Culver was notified to appear before the Board due to his conviction in the Circuit Court of Ingham County upon the charge of Abortion, on May 29, 1930.

Mr. Charles Hayden, attorney, appeared for Dr. Culver and stated that an appeal had been taken from the conviction, and asked that the Board delay final action until after this matter had been settled.

By Dr. Kelly, seconded by Dr. Brook:

RESOLVED, that the Board postpone action upon Dr. Culver until the October meeting of the Board.

Yeas, 9; nays, 0. Motion carried.

Re: Dr. James McEwan, 753 David Whitney Building, Detroit, Mich.

Age, 54. Graduate of Detroit College of Medicine, 1907. Licensed in Michigan, August 1, 1907, through Board examination. Practiced in Detroit since that time.

Dr. McEwan was served with a notice to appear before the Board due to his conviction in the U. S. District Court, Detroit, Michigan, on March 20, 1930, upon a Narcotic charge to which he pleaded guilty, and paid a fine of \$1,500.00. Dr. McEwan asks leniency by the Board.

The Committee recommends that this license be not suspended.

By Dr. Lemire, seconded by Dr. Tiefer:

RESOLVED, that the report of the Committee be adopted.

Yeas, 10; nays, 0. Motion carried.

Re: Dr. Neil E. Campbell, Detroit, Michigan, (now at Narcotic Farm, Capac, Michigan).

Age, 44. Graduate of Detroit College of Medicine, 1912. Licensed in Michigan, March 23, 1912, after a Board examination.

Dr. Campbell was served with a notice to appear before the Board for a hearing, due to his conviction upon a Narcotic charge in the U. S. District Court, Detroit, on April 5, 1930. He pleaded guilty, and sentence was deferred for six months, in order that he might receive treatment.

Mr. L. A. Koepfen, Managing Director of the Narcotic Educational Association, 51 W. Warren Avenue, Detroit, requested the privilege of appearing before the Board in Dr. Campbell's behalf, and did appear. He asked that action

on Dr. Campbell be delayed pending further treatment under his direction.

By Dr. Brook, seconded by Dr. Kelly:

RESOLVED, that this matter be laid on the table until the October meeting of the Board.

Re: Dr. E. D. Welsh, 358 Division Street S., Grand Rapids.

Graduate of Michigan College of Physicians and Surgeons, 1905. Licensed in Michigan, May 19, 1905, upon credentials.

Dr. Welsh was served with a notice to appear before the Board due to his conviction in the U. S. District Court, Grand Rapids, March 14, 1930, upon a Narcotic charge, and to which he pleaded guilty. He is now serving his sentence in Leavenworth Penitentiary and asks that the Board delay action on the matter until he shall be able to appear personally and explain the circumstances. A letter has also been received from Mrs. Welsh, asking leniency and stating that she is unable, financially, to appear or obtain an attorney to represent Dr. Welsh.

The Committee recommends that this matter be laid on the table until the next meeting of the Board.

By Dr. Brook, seconded by Dr. Lemire:

RESOLVED, that the recommendation of the Committee be adopted.

Yeas, 10; nays, 0. Motion carried.

Re: Dr. Bion Whelan, Hillsdale, Michigan.

Age, 72. Graduate of University of Michigan, Medical School, 1879. Licensed in Michigan upon credentials, Jan. 26, 1900, License No. 4. Practiced in Hillsdale all his life.

Dr. Whelan was served with a notice to appear before the Board, due to his conviction in the U. S. District Court, on April 3, 1930, upon a Narcotic charge, to which he pleaded guilty. His sentence of two years in Leavenworth was suspended for five years on the condition that he retire from the practice of medicine and not again prescribe narcotic drugs.

Dr. Welsh did not appear.

The Committee recommends that Dr. Whelan's license be revoked.

By Dr. Brook, seconded by Dr. Lemire:

RESOLVED, that the recommendation of the Committee be adopted.

Re: Dr. Alex H. Pearson, 105 W. Huron Street, Ann Arbor.

Graduate of University of Michigan, Medical School, 1904. Licensed in Michigan upon credentials, June 22, 1904. Practiced in Ann Arbor and vicinity since that time.

The Washtenaw County Medical Society charges him with "association with an unregistered practitioner of medicine" inasmuch as his nephew, Wm. B. Peach, was convicted of practicing medicine without a license, in January, 1929, and had been in Dr. Pearson's office. Due to these charges Dr. Pearson was dropped from membership in the Washtenaw Society, April 25, 1929. The Washtenaw County Medical Society asks that his license to practice medicine be revoked.

The Committee recommends that no action be taken in this matter at this time.

By Dr. Kelly, seconded by Dr. Tiefer:

RESOLVED, that the recommendation of the Committee be adopted.

Yeas, 8; nays, 2. Motion carried.

Re: Dr. Alvin T. Bonathan, c/o Hurley Hospital, Flint.

Graduate of University of Michigan, June 17, 1929, after three years of actual enrollment in the medical school, but with previous work taken in the Literary College. He has been registered in the medical school during the past year, as well as serving an internship in Hurley Hospital, Flint.

Asks that a certificate of registration be given him, if he is successful in passing the Board examination which he is writing in June, 1930.

The Committee recommends that Dr. Bonathan's request be granted.

By Dr. Brook, seconded by Dr. McIntyre:

RESOLVED, that the recommendation of the Committee be adopted.

Yeas, 10; nays, 0. Motion carried.

Re: Dr. Daniel Van Woerkom, 118 S. East Street, Lebanon, Indiana.

Completed the medical course, University of Michigan, in June, 1928, but his diploma was held up until February, 1929, due to his failure in the Comprehensive Examination. Served one year internship, July 1, 1928, to July 1, 1929, in St. Francis Hospital, Pittsburgh, making him six months short of the required service following graduation. He was advised to remain in a hospital for this additional period, but did not and has been practicing with a physician in Lebanon, Ind. Asks that we accept this assistantship in lieu of the additional intern service required.

The Committee recommends that his request be granted.

By Dr. Brook, seconded by Dr. Marshall:

RESOLVED, that the committee's recommendation be adopted.

Yeas, 10; nays, 0. Motion carried.

Re: Dr. G. C. Hall, Ann Arbor, and Dr. Bruce R. Elliott, Lansing.

Completed the medical course in the University of Michigan, June, 1929, but held up due to failure to pass the Comprehensive examinations. Asks that the Board waive the intern requirement following date of conferring of M.D. diploma.

The Committee recommends that this request be not granted.

By Dr. Kelly, seconded by Dr. English:

RESOLVED, that the recommendation of the Committee be adopted, unless the University of Michigan corrects the date of their diplomas.

Yeas, 10; nays, 0. Motion carried.

Re: Dr. Trian Leucutia, Harper Hospital, Detroit.

Age, 38. Graduate of University of Budapest, December 23, 1916. Specialized in X-ray work in University of Paris, and University of Cambridge, England, 1919-1921. He has had charge of the X-ray department of Harper Hospital (Drs. Hickey, Evans and Reynolds) for several years. Asks that the Board accept his credentials and permit him to write the Board examination, as a qualification for licensure in this state.

The Committee recommends that his request be granted.

By Dr. Brook, seconded by Dr. Tiefer:

RESOLVED, that the recommendation of the Committee be adopted.

Yeas, 10; nays, 0. Motion carried.

Re: Dr. Thomas C. Smith, Battle Creek Sanitarium, Battle Creek, Michigan.

Age, 37. Graduate of Queen's University, Kingston, Ontario, January 31, 1919. Licensed in New York State, June 25, 1925, through Board examination. Recommended by Dr. Stuart Pritchard, of the Battle Creek Sanitarium. Dr. Smith asks an indorsement of his New York license.

The Committee recommends that Dr. Smith's request be granted.

By Dr. Brook, seconded by Dr. Tiefer:

RESOLVED, that the recommendation of the Committee be adopted.

Yeas, 10; nays, 0. Motion carried.

By Dr. Brook, seconded by Dr. Kelly:

RESOLVED, that the report of the Committee as a whole be adopted.

Yeas, 10; nays, 0. Motion carried.

MISCELLANEOUS

Re: Dr. Algot R. Nelson, Grand Rapids, Michigan.

Graduate of Yale University, School of Medicine, 1928.

Asks that his residency in Butterworth Hospital, Grand Rapids, Michigan, be accepted as part of the hospital requirement of the Board.

The Committee recommends that Dr. Nelson's request be granted.

By Dr. Brook, seconded by Dr. Marshall:

RESOLVED, that the intern services presented by Dr. Nelson be considered as fulfilling the minimum requirement of the Board.

Yeas, 10; nays, 0. Motion carried.

Re: Dr. Walter E. McGillicuddy, Detroit, Michigan.

Dr. McGillicuddy wrote the Board examination at Detroit, in 1926, and was issued License No. 10828, July 17, 1927, through a Board action.

The following letter has been received from the Detroit College of Medicine and Surgery, in this connection:
Jan. 16, 1930.

Michigan State Board of
Registration in Medicine,
Detroit, Michigan.

Dear Doctor Warnshuis:

My attention has recently been called to the statement that Mr. W. E. McGillicuddy is practicing medicine in the State of Michigan, and that he claims to have completed the routine course in medicine at the Detroit College of Medicine and Surgery, but that he was refused a diploma because of a condition incurred during his first year of registration.

As you are, of course, aware, the Detroit College of Medicine and Surgery does not concern itself with the rulings of the State Board of Registration in Medicine and is entirely satisfied with them whatever they may be. We therefore, feel that Mr. McGillicuddy's medical licensure does not concern us. We are concerned, however, with the statement which seems to have been pretty well disseminated that he completed the medical course offered in the Detroit College of Medicine and Surgery and that he received unfair treatment in the institution.

Herewith, I enclose a copy of a letter written in 1920 to Dr. B. D. Harrison, then Secretary of the State Board of Registration, giving a full statement concerning Mr. McGillicuddy's case. As you will note from this letter and the accompanying statement, Mr. McGillicuddy was never a fourth year student in this school and never succeeded in completing the work of a single year of his registration.

If any criticism was due the college in the McGillicuddy case it was for having been unduly lax and lenient in handling the matter. The only comfort that I can find in the affair is that all this took place prior to my connection with the school and that most of it occurred before the

discontinuance of the old Detroit College of Medicine and the establishment of the Detroit College of Medicine and Surgery with standards conforming to the requirements of the American Medical Association.

I trust that you will realize that this letter is merely for your information and that we neither bear any ill will toward Mr. McGillicuddy nor do we desire to interfere with his activities so long as we are acquitted of responsibility for the same.

With kindest personal regards, I remain,

Yours sincerely,
DETROIT COLLEGE OF MEDICINE
AND SURGERY.

(Signed) W. H. MACCRACKEN, Dean.

By Dr. Kelly, seconded by Dr. Brook:

RESOLVED, that Dr. McGillicuddy be required to appear before the October Board meeting to explain the charges preferred against him.

Yeas, 10; nays, 0. Motion carried.

Re: Dr. W. Ellwood Tew, Bessemer, Michigan.

Dr. Wm. F. English, Saginaw, Michigan.

Drs. Tew and English request the privilege of a special written Board examination, as an additional licensure qualification in this state.

By Dr. Tiefer, seconded by Dr. Kelly:

RESOLVED, that the requests be granted and that the President be instructed to appoint a Committee to conduct the examinations.

Yeas, 10; nays, 0. Motion carried.

The President appointed Drs. Kelly and McLaughlin as a Special Examining Committee.

Re: Traveling Expenses.

Dr. McIntyre reported several conferences with the State Administrative Board in connection with a new arrangement covering the traveling expenses of the Board members, but that nothing definite had been arrived at, as yet.

By Dr. McIntyre, seconded by Dr. Kelly:

RESOLVED, that the traveling expense vouchers of the Board members be held up until after the Detroit meeting.

Yeas, 10; nays, 0. Motion carried.

Upon motion the meeting adjourned.

NELSON McLAUGHLIN, *President*.
F. C. WARSHUIS, *Secretary*.

PITUITARY GLAND HAS ROLE IN HARDENING OF ARTERIES

The probable role played by the pituitary gland in the development of arteriosclerosis, more familiarly known as hardening of the arteries, was discussed by Dr. Robert C. Moehlig, of Detroit, at the meeting of the Association for the Study of Internal Secretions. The effect of feeding animals on high fat diets, on normal diets with injections of the posterior lobe of the pituitary gland, and on high fat diets with the pituitary injections were reported. Control animals were fed on normal diets alone and compared with the other groups. Four of the five animals fed on the high fat diet alone showed gross arteriosclerotic changes of the aorta, the main blood vessel from which the arteries of the body proceed. Those fed on the high fat diet plus the pituitary extract showed the most intense lesions of all. Eight of the ten animals showed marked arteriosclerotic changes and microscopic examinations disclosed changes of the type seen in human hardening of the arteries. The injection of the pituitary extract alone, without any dietary influence, produced overdevelopment of the cortex of the adrenal glands. Dr. Moehlig called this an important link in the chain of arteriosclerosis.

At the same meeting, Dr. W. Raab, of Prague and Vienna, described experiments of his which showed the role played by the pituitary gland in regulation of the body's fat. Dr. Raab concluded that injection of pituitary extract favors the absorption of fat by the liver. Assuming that a certain amount of fat is normally destroyed in the liver, it is evident that if the pituitary is disturbed in its coöperative activity with the brain and nervous system, these fat amounts will not be destroyed. They will be stored in the tissues and consequently lead to obesity, Dr. Raab said.—Science Service.

COUNTY SOCIETIES

GRATIOT-ISABELLA-CLARE COUNTY

The May meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright House, Alma, Thursday, May 15. Dinner was served to 18 members and three visitors. President Budge called the meeting to order. The question of the June meeting, relating to County Health Units, was discussed because of the recent death of Doctor Guy L. Kiefer. By motion it was voted to hold this meeting as planned.

By motion it was voted to not hold meetings in July or August and to plan to have motion pictures for the September meeting.

President Budge then introduced Dr. Rockwell M. Kempton and Dr. Oliver W. Lohr from Saginaw. The former took up Meningitis from the clinical side, relating the experience in the Saginaw epidemic of the past two years in which they had a mortality of 60 per cent in those under one year old and a general mortality of 28 per cent. If they survived the first week they usually recovered.

Intraspinal serum treatment early was the most satisfactory. In the majority of cases four days' treatment was sufficient.

Dr. Lohr took up the subject from the Laboratory side, describing the method of growing cultures, stating that in some early cases no germs would be found in the spinal fluid. The blood count was not a reliable guide for treatment or prognosis. The prognosis was thought to be more favorable if there were more germs intracellular than in the serum. In this epidemic about 14 per cent were carriers, when no epidemic is present about 5 per cent of the population are carriers. Some cases of sudden death at the time of the epidemic were proved by post-mortem not to be epidemic meningitis. Many more interesting and practical points were brought out in the discussion.

Dr. Kempton and Dr. Lohr were given a rising vote of thanks for this very practical presentation. Meeting adjourned.

The June meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright House, Alma, Thursday, June 12. Ten members and five visitors were present for the 6:30 dinner and five members came in after dinner.

President Budge called the meeting to order, stating the purpose of the meeting, and introducing Dr. W. H. Pickett from the State Board of Health as the first speaker. Dr. Pickett went into details as to the object of the County Health Unit, stating there were 468 full time County Units in the United States, 40 in Ohio and five in Michigan already working and three more counties expecting to start this fall.

Following Dr. Pickett, President Budge introduced Dr. Donald E. Camp, full time Health Officer of Midland County, who explained how the Unit has worked so far in Midland County, having only started there January 1, 1930.

President Budge then introduced Dr. O. L. Ricker, who explained how the full time unit has worked in Wexford County for the past two years. Dr. Ricker explained how a committee of three members of the Wexford County Society is appointed to adjust differences between the Health Officer and members.

President Budge then said the meeting was open for discussion. Many asked questions of the speak-

ers; after these were answered, Dr. W. E. Barstow introduced the following motion: "That this Society approves the formation of a County Health Unit," seconded by Doctor T. J. Carney. After considerable discussion this motion was carried.

In the discussion which followed the passing of this motion, it was suggested that, inasmuch as this was a single County Unit, the Secretary secure the vote of the Gratiot County members to this motion.

After the visiting speakers were thanked for their kindness in coming and presenting this subject to the members the meeting was adjourned.

E. M. HIGHFIELD, M.D., *Secretary*.

OAKLAND COUNTY

The monthly meeting of the Oakland County Medical Society was held on June 19, 1930, at the Northwood Inn, Royal Oak. Following dinner the society adjourned to the rooms of the Royal Oak Division of the Oakland County Department of Health for the formal meeting.

As the minutes of the previous meeting had been published in the "Bulletin," they were not read.

A letter from Mrs. Josephine Kiefer was read, in which she expressed the thanks of herself and family for the kind letter of sympathy and the beautiful tribute paid the memory of her husband, Dr. Guy L. Kiefer, by the Oakland County Medical Society.

The Secretary read the following applications for membership:

Dr. O. L. Quillen.....Pontiac
Dr. C. E. Jeffery.....Ferndale

The scientific program was given over to a discussion of the progress in medical roentgenology.

The subject was introduced by Dr. Hans A. Jarre, Detroit, who stated that the science of roentgenology had been advancing rapidly in recent years and that its limits had not been reached. The roentgenologic laboratory was becoming the clearing house for many obscure conditions, and to secure the most satisfactory results requires full coöperation between the roentgenologist and the private practitioner.

He related the history of the development of intravenous pyelography, telling of the work begun at Professor Lichwitz's laboratory in Hamburg; the continuance of the study at Professor von Lichtenberg's clinic at Berlin; the synthesizing of over 700 compounds by the chemist, Professor Arthur Binz of Berlin, which resulted in the discovery of an organically bound iodine compound, suitable for intravenous injection, being non-toxic, soluble in water and neutral in reaction, the drug now being known as uroselectan.

Much of the early work on animals was done at Dr. Lichwitz's clinic. The clinical application of this new compound was successfully carried out by Dr. Swick of New York at the von Lichtenberg clinic in Berlin, and continued later in this country.

The intravenous method is particularly applicable when retrograde pyelography is indicated and when the latter method, for mechanical or infectious reasons, becomes impossible or dangerous.

With uroselectan we have a new method of examining the kidney, ureters, and bladder, anatomically, functionally, dynamically and physiologically.

Dr. Lynn Hershey, Detroit, in his discussion of roentgenologic advance in neurology, stated that medicine was becoming more of a science and less of an art, though medicine is not a pure science, as the human being is not made after an exact pattern.

He stated that the use of the roentgenogram had become indispensable in neurology and described the procedures followed in encephalography and ventriculography. He gave a lantern demonstration

showing cases with brain tumor and other abnormal conditions.

In a discussion of the treatment of cerebral injury cases produced by trauma, he stated that the patient dies from hemorrhage and increased intracranial pressure, that they do not die from the fracture unless it is a depressed fracture.

Dr. W. A. Wilson, Detroit, discussed recent roentgenologic studies on intra-thoracic organs. He told of certain characteristic diagnostic points that had been brought out by these studies. Roentgenograms were presented showing abnormal conditions of the esophagus, mediastinum and bronchi, as well as some showing the lodgment of various foreign bodies, that were later successfully removed.

New conceptions of the physiology of the bronchial tree were demonstrated, illustrated by moving pictures, which showed the changes in the size and shape of the air passages during respiration.

Guests of the society were Dr. Selaheddin Bedri, Health Officer, Minister of Health, Angora, Turkey, and Dr. Tahsin Sevket, epidemiologist in the Hospital Numune, Angora, Turkey. They have attended the school of public health at Johns Hopkins University during the past year and have come here from Lansing, where they spent several weeks at the Michigan Department of Health, studying with the Training School for Health Officers. They are spending several days in this vicinity observing the methods of the Pontiac and the Oakland County departments of health.

It was moved by Dr. Larson that the Society extend a vote of thanks to Dr. Jarre, Dr. Hershey, and Dr. Hudson for the very instructive and fascinating program they had presented. Supported. Carried.

There being no further business, the meeting adjourned.

C. A. NEAFIE, M.D.,
Secretary.

JACKSON COUNTY

The May Meeting of the Jackson County Medical Society was held at the Hayes Hotel Tuesday evening, May 20, 1930. Dinner was served at six-thirty, following which President Cooley called the meeting to order.

The minutes of the previous meeting were approved as published in the Bulletin. The chairman of the Legislative Committee, Dr. Geo. R. Pray, was called upon for a report. The committee, which is composed of Drs. Pray, Hungerford and Meads, all attended the meeting held in Ann Arbor on May 16, 1930. Dr. Pray gave a résumé of the meeting in Ann Arbor, which was supplemented by remarks from Drs. Hungerford and Meads. It was brought out that during the coming session a policy of defense would be followed. Also that a change in the system of registration to one similar to the system in vogue in the state of New York, would some day be brought about. This was a splendid report from a very active committee.

The committee on Preventive Medicine was called upon for a report. Dr. Clark, chairman, had no report to render.

Dr. Brown, chairman of the committee on the nursing situation at the contagious hospital, was called upon for a report. The committee thought that the request of the District Nurses Association was premature and advised that action of any sort on this request be put over for several months.

Dr. Porter, chairman for June, asks for suggestions as to what type of meeting should be held, and whether or not any meeting at all should take place, inasmuch as the A. M. A. meeting is being held at Detroit during the fourth week of June. A motion by O'Meara-Munro that a June picnic be held was passed.

The Society stood in silence for two minutes in memory of the late Dr. C. E. Stewart and Dr. Guy L. Kiefer. A committee of Drs. Peterson, McLaughlin and Alter were appointed to draw up resolutions on the death of these two men, which shall be spread on the minutes of the society.

President Cooley then turned the meeting over to Dr. George Pray, chairman for the day. Dr. Pray introduced as speaker of the evening Dr. I. Harrison Tumpeer of Chicago, Ill. Dr. Tumpeer gave a very interesting talk on the problems of infant feeding, a synopsis of which will appear in a later issue. Following considerable discussion the meeting adjourned.

Attendance forty-four.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. L. J. HARRIS, President, Jackson, Mich.

MRS. J. EARL McINTYRE, Secretary, Lansing, Mich.

BENTON HARBOR SESSION

Now that the National Auxiliary Convention has been brought to a successful close in Detroit, let us turn our thoughts and plans to the State Convention which occurs in Benton Harbor, September 15-16-17.

Having been inspired by reports from other states as to their activities regarding State Health, Civic Health, County programs, Hygeia circulation and so on, we feel that we have a great deal to do at this meeting, so we want to have the attendance larger than ever.

When we see that Michigan in 1928 had a membership of 262 and in 1930, 648, we feel that it has grown very well indeed, but we know that there are so many counties unorganized and so many who are eligible who are not members, that we must not be too complacent.

Mrs. Kiefer, who is organization chairman, has left for Europe—she had planned this summer to organize societies in the northern part of the state, as she expected to be there at this time. We regret that she has been unable to do so, but before going away she has added Oakland county to our list, which we welcome cordially, and Washenaw county is under way.

Especially do we want Auxiliary members to make a supreme effort to come to Benton Harbor, which is accessible from up and down the State. They are planning many pleasant entertainments for us and anticipating our coming. We will also welcome all wives of physicians, with whom we hope to become better acquainted. The program for our convention will be found in the September issue of the Journal.

(Mrs. L. J.) MABEL HOUGHTON HARRIS.

GENERAL NEWS AND ANNOUNCEMENTS

Dr. Charles Dutchess of Detroit was operated upon for appendicitis on June 30th.

Dr. James Matthews of Detroit has returned from a three months sojourn in California.

Dr. and Mrs. J. H. Sanderson, West Warren Avenue, Detroit, left for Europe on July 1st.

Dr. and Mrs. Max Ballin of Detroit are spending the summer in Germany visiting relatives in Berlin.

Be sure to send in your hotel reservations for the Annual Meeting. See this issue for program and announcements.

Drs. H. J. Van den Burg, T. D. G. Gordon and E. W. Schnoor of Grand Rapids spent the month of July on the Pacific coast.

Dr. J. M. Robb assumed the duties of president of the Wayne County Medical Society on July 1. Dr. H. W. Plaggemeyer is president-elect of the same organization.

Dr. W. R. Chittick of San Diego, California, who had practiced for over forty years in Detroit, was one of the guests at the Annual Convention of the American Medical Association.

Dr. L. J. Hirschman of Detroit, Past-President of the Michigan State Medical Society, was elected Vice President of the American Medical Association at the Detroit meeting.

Dr. F. C. Warnshuis has been re-elected Speaker of the House of Delegates of the American Medical Association. This is the twelfth year of Dr. Warnshuis' occupancy of this office.

Mr. W. J. Burns, executive secretary of the Wayne County Medical Society, participated in a symposium on Organizational Work at the Minnesota State Medical Society Annual Meeting held in Duluth in July.

At the annual meeting of the Detroit Academy of Surgery the following officers were elected for the ensuing year: President, Dr. H. W. Hewitt; Vice President, Dr. Ira Downer; Secretary and Treasurer, Dr. Roger Walker.

Dr. Frank L. Reynolds has been appointed Superintendent of the Grand View Hospital, Ironwood, succeeding Dr. Walter Reineking, who resigned to accept the superintendency of the Madison, Wisconsin, County Sanitarium.

Dr. P. M. Hickey, professor of roentgenology of the University of Michigan, and Dr. Alexander Blaine of the Jefferson Clinic of Detroit received honorary degrees at the annual commencement of the Detroit City College held on the 19th of June. Dr. Hickey received the honorary degree of D.Sc. and Dr. Blaine M.S. degree.

Mr. Robert Oakman of Detroit entertained the trustees and officers and several other guests on his yacht on Lake St. Clair and the St. Clair River on the 22nd of June. The trustees of the American

Medical Association held their annual meeting on the boat and everyone reported a very pleasant voyage over the waters amid the cool breezes of Lake St. Clair.

The registration of doctors at the annual meeting in Detroit of the American Medical Association numbered 5,300. It has been estimated that for every doctor registering as a Fellow of the American Medical Association there was one guest, consisting of doctor or exhibitor or doctor's wife, which would mean that the number attending the convention was considerably over 10,000.

Marquette will be the location of the children's clinic to be operated under the Couzens Fund. This will necessitate the erection of a building which will cost approximately \$75,000 with an appropriation of maintenance of about \$50,000. The building will be connected with St. Luke's Hospital at Marquette. The staff of the clinic will be selected by the Department of Post Graduate Medicine of the University of Michigan.

Dr. German, of Grand Rapids, is again arranging for an interesting Scientific Exhibit. He solicits contributions.

A varied Commercial Exhibit is being provided for in Sommer Hall. Hold your orders and place them with these exhibitors.

Delegates are urged to be present by 9:00 A. M., Monday, September 15, to present their credentials. The House of Delegates will have a large agenda of business to transact.

On June 6, the Saginaw Valley specialists in diseases of the eye, ear, nose, and throat, organized the Saginaw Valley Academy of Ophthalmology and Otolaryngology at the Hotel Bancroft. The society will hold monthly meetings. The following officers were elected: President, Dr. Fred J. Cady, Saginaw; vice president, Dr. P. R. Urmston, Bay City; secretary-treasurer, Dr. Walter K. Slack, Saginaw.

Dr. Charles Baker of Bay City addressed the society on the subject of "Deafness."

The annual dinner of the Alumni of the Detroit College of Medicine held on the evening of June 25th at the Statler Hotel consisted of the largest gathering of the Alumni that was ever gotten together. The large ballroom of the Statler Hotel was crowded to capacity. The program of the evening was supplied by Dr. James Inches, who presented some marvelous moving picture films illustrating his African adventures. Dr. Inches is a popular lecturer who never fails to delight his audiences.

The Oakland County Medical Society had as speakers at their last meeting on May 15th, Dr. C. J. Lyons, professor of oral surgery in the dental school and the medical school of the University of Michigan, and also Dr. J. G. R. Manwaring of Flint. The subject of the evening was Focal Infections. Dr. Lyons prefaced his address by recounting the history of the dental profession in Michigan. He discussed the subject of focal infection from the dental viewpoint. Dr. Manwaring advocated the thorough examination of patients in the way of determining the particular foci which constituted the cause of the disease.

The Board of Regents of the University of Michigan have appointed an executive committee to govern the medical school. This act will divide the administration of the medical school among several department heads. Dr. F. G. Novy will be at the

head of the bacteriology department and will head the division of pre-clinical medicine. Dr. James D. Bruce will be director of postgraduate activities in medicine. Clinical medicine will be under the direction of Dr. Udo J. Wile; the University Hospital will be under the direction of Dr. Harley A. Haynes. Dr. Arthur A. Curtis, who was formerly assistant to the Dean of the medical school, has been appointed secretary of the school.

The Upper Peninsular Medical Association will hold its annual meeting at Marquette, Michigan, August 7 and 8. The following physicians and surgeons will supply the program: Dr. F. A. Collier of Ann Arbor will speak upon Post-Operative Pulmonary Complications; Dr. Robert Preble of the Northwestern University, Some Generalizations of Heart Disease; Dr. Russel A. Hibbs, Orthopedic Surgery, and Dr. J. A. Bergen of the Mayo Clinic, Ulcerative Colitis. Dr. B. G. Montgomery of Sault Ste. Marie, Mich., and Dr. William S. Jones of Menominee, Mich., will also appear on the program, subjects not announced at the time of going to press.

The second number of Volume 1 of the Journal of the Detroit College of Medicine and Surgery has reached us. Dr. James E. Davis, professor of pathology, is editor in chief, with Dr. W. S. Reveno and Dr. D. G. Ross as assistants. This number contains the following papers by members of the faculty of the College: Tonic Automatism in the Stomach of the Monkey as the Determining Factor in the Type of its Muscular Response—Comparative Studies VII, by T. L. Patterson; Serum Pigmentation and Kinetics of the Latent Jaundice of Lobar Pneumonia, Norman W. Elton; Aleukemic Leukemia—Case Report, William S. Reveno; Chronic Irritable Colon, L. J. Steiner; A Review of Cardiac Adaptability. Emil Rupprecht; and Classification of Nephropathology, James E. Davis.

The reception to the President of the American Medical Association was followed by a dance in the two ballrooms of the Statler Hotel on the evening of June 26th. This function was given by the Wayne County Medical Society. At the head of the receiving line was Dr. Angus McLean of Detroit, who introduced the guests to the President, Dr. Morgan, and Mrs. Morgan, of Washington, D. C. Following them were Dr. and Mrs. E. Starr Judd, President-elect, of Rochester, Minnesota; Dr. and Mrs. M. L. Harris of Chicago, Ill., Past-President of the Society; Dr. Rollin Stevens and Dr. Mary Stevens of Detroit; Dr. and Mrs. A. S. Brunk of Detroit; Dr. and Mrs. Macotte, Washington, D. C.; Dr. and Mrs. A. B. Conklin of Washington, D. C.; Dr. and Mrs. Jennings of Detroit; Dr. and Mrs. B. R. Shurly of Detroit; and Dr. and Mrs. J. D. Brook of Granville, Mich.

The committee on awards of the scientific exhibit of the American Medical Association awarded certificates of merit, Class 1, to the following physicians of Detroit: Dr. James E. Davis and Dr. Norman W. Elton of the Detroit College of Medicine and Surgery for serum pigmentation studies; Drs. Rollin A. Stevens, Hands A. Jarre and Clyde K. Halsey for roentgenographic and pathologic motor phenomena in various organs by fast serial roentgenography. The gold medal in class 2 was awarded to Drs. F. G. Novey, M. H. Soule and P. B. Hadley of the University of Michigan for excellence of presentation of studies on respiration and dissociation of the micro-organism. Awards in Class 2 are made for exhibits which do

not exemplify purely experimental studies and which are judged on the basis of the excellence of correlating facts and excellence of presentation.

On the evening of June 23 the Michigan State Medical Society entertained the House of Delegates of the American Medical Association at dinner at the Detroit Yacht Club, Belle Isle, Detroit. Between four and seven o'clock the delegates of the American Medical Association and council of the Michigan State Medical Society were entertained by rides around the Island in high speed motor boats. The past-presidents of the American Medical Association since 1900, who with three or four exceptions were present, were seated at the speakers' table. President J. D. Brook of the Michigan State Medical Society in a well worded speech extended the Society's welcome to the guests and introduced Dr. C. G. Jennings of Detroit, who was the toastmaster of the evening. Each of the past-president guests was invited to deliver a brief address on what he considered his greatest experience. The speeches were limited to ten minutes and all proved very entertaining. This social event was thoroughly enjoyed by everyone present. (See page 581 this number of the *Journal M. S. M. S.*)

The first informal conference of Executive Secretaries of County Medical Societies was held in Detroit, Wednesday, June 25, 1930, on the occasion of the A. M. A. meeting. Luncheon was served on the Roof Garden of the Wayne County Medical Society; golf and swimming were enjoyed at the Lakewood Country Club, Windsor, Canada, followed by dinner and the business meeting. Mr. William J. Burns, Executive Secretary of the Wayne County Medical Society, was chosen as Chairman, and Mr. H. Van Y. Caldwell, Executive Secretary of The Academy of Medicine of Cleveland, was elected Secretary. The conference consisted of the interchange of ideas for the good of the members and the individual County Medical Societies which they represented. The Executive Secretaries present at this initial conference included Mildred E. Jeffrey, Dayton, Ohio; Helen G. Keelor, Cincinnati, Ohio; J. Louis Neff, Mincola, N. Y.; E. H. Bartelsmeyer, St. Louis, Mo.; E. M. Kingery, Des Moines, Iowa; H. C. Gerber, Jr., Toledo, Ohio; Alice C. Stotlar, Seattle, Wash.; Theodore Wiprud, Milwaukee, Wis.; H. Van Y. Caldwell, Cleveland, Ohio; Dr. Alec Thompson, Brooklyn, N. Y., and Wm. J. Burns, Detroit, Mich.

Dr. Wm. H. Robey, President of the American Heart Association, stated that he considered the meeting held in Detroit June 24 the best in the history of the Association. At noon, a luncheon was served in St. Mary's Hospital for the various officers of the Association, those who participated in the program and a few invited guests. Among those present were Drs. J. B. Herrick of Chicago, R. H. Halsey of New York, Alex. Lambert of New York, W. S. Thayer of Baltimore, Emanuel Libman of New York, H. E. B. Pardee of New York, E. P. Carter of Baltimore, J. E. Talley of Philadelphia, Frederick M. Smith of Iowa City, Lewis Conner of New York, U. J. Wile and F. N. Wilson of Ann Arbor, Geo. Herrmann of New Orleans, J. G. Carr and many other leading men in cardiology. There were seventeen papers, many of them illustrated by lantern slides. Probably the most beautifully illustrated was that on "Anatomic Types of Cardiac Syphilis Encountered in Cases of Sudden Death," by Dr. H. S. Martland of Newark, New Jersey. The papers presented covered all phases of cardiovascular syphilis. The unusually good program was arranged by Dr. Pardee of New York.

THE DOCTOR'S LIBRARY

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 10, No. 3. (New York Number—June, 1930.) Octavo of 265 pages with 123 illustrations. Per Clinic Year, February, 1930, to December, 1930; Paper \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1930.

THE MEDICAL CLINICS OF NORTH DAKOTA. (Issued serially, one number every other month.) Volume 13, No. 6 and INDEX VOLUME. (Mayo Clinic Number—May, 1930.) Octavo of 275 pages with 55 illustrations. Per Clinic Year, July, 1929, to May, 1930; Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1930.

MANUAL OF THE DISEASES OF THE EYE FOR STUDENTS AND GENERAL PRACTITIONERS. By Charles H. May, M.D. Thirteenth Edition, Revised with 374 original illustrations including 23 plates, with 73 colored figures. William Wood and Company, New York; Price \$4.00.

This little work on the eye is too well known to need any lengthy description. It is one of the most successful textbooks ever published and probably for a general manual of diseases of the eye it has no superior in the English language. The reviewer has very pleasant recollections of a former edition of this work studied during his student days. In this thirteenth edition the author announces that he has re-written whole chapters and made alterations that would seem necessary to bring the text up to date. Among the subjects incorporated into the present volume is the use of the slit-lamp and corneal microscope. This work has been translated and has gone through a considerable number of editions in Spanish, French, Italian, Dutch, German, Japanese and even Chinese. The student and general practitioner and we do not hesitate even to add the eye specialist, will find this little work as useful as ever.

OBSTETRICS FOR NURSES. By Joseph B. DeLee, M.D., Professor of Obstetrics and Gynecology, University of Chicago, School of Medicine; Obstetrician to the Chicago Lying-In Hospital and Dispensary. New (9th) Edition, Revised. 12mo of 645 pages, with 269 illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, \$3.00 net.

This book is the ninth edition of Dr. DeLee's well known textbook of Obstetrics for Nurses. Many new proven facts are contained in it and obsolete matter has been omitted. Considerable space is devoted to pre-natal care, particular attention being given to diet. There is also a chapter on infant feeding which has been re-written by Drs. A. F. Abt and B. F. Feingold. Considerable space is devoted to the care of obstetrical patients in the home, since that is where the majority of births still occur.

RECENT ADVANCES IN PHYSIOLOGY. By G. Lovatt Evans, D.Sc., F.R.C.P., F.R.S., Professor of Physiology of the University of London. Fourth Edition. 446 pages. Price, \$3.50. P. Blakiston's Son and Company, Philadelphia, Pa.

The fourth edition of this work occupies a unique place among physiological writings in being a concise yet readable supplement to texts in physiology. Emphasis is given to the advances of the past few years. There are substantial additions to each of the former chapters of which five deal with the physiology and chemistry of the vascular system, three with muscular contraction and exercise and one to each of the following, the nerve impulse, tissue excitability, the functions of the labyrinth, conditioned reflexes and the active principles of certain endocrine glands.

OF GENERAL MEDICAL AND SURGICAL INTEREST

INSULIN: ITS USE AND MISUSE

Nellis B. Foster, New York, says that with the advent of insulin there were sound reasons to hope that the mortality from diabetes would show a definite decrease. This hope has not yet been realized. Mortality statistics for diabetes show a decided increase. In an analysis of 1,800 cases of diabetes, the Metropolitan Life Insurance Company found that insulin had been used in 881, or only 49 per cent. Of those receiving insulin, 54 per cent were given insulin for the first time within a month of death. Why should this be so? First of all there is in the medical profession a most astonishing fear of insulin. A great many physicians seem to be more afraid of insulin shocks than of diabetic coma. The somewhat undue emphasis of the effects of excess dosage contained in the leaflet that comes in each package of insulin is doubtless in part responsible for this timidity. Then, too, there have been chimeras, such as that insulin once begun can never be discontinued. Well, for children it cannot. Formerly diabetic children lived a year or two of miserable existence and then died in coma. Now there are hundreds, probably thousands, who look and act like normal children. There are also thousands of adults who have been carried over some exigency, formerly fatal to diabetic patients, as severe infections, operations, pregnancies or tuberculosis, by the use of insulin, which was a dire necessity for a time but finally was not required. In many surgical conditions complicated by diabetes, insulin is needed during the preoperative and postoperative periods; but in the majority of cases the diabetic state is mild and insulin can be abandoned once convalescence is established. The improvement in the mortality in this class of cases is the answer to one who does not believe in insulin. For several years the death rate for surgical conditions complicated by diabetes at the New York Hospital has been practically the same as for these conditions not complicated by diabetes. That means that acidosis, coma, the spread of infections, inanition are preventable when insulin is used intelligently. In order to control acidosis the surest procedure is to use insulin and dextrose. The amount of insulin required is variable. One should be sure to use enough. The urine should be tested every two hours during the period of intensive treatment; if there is sugar, insulin should be used; if none, dextrose may be given. This general method is applicable in any complication of diabetes, when coma looms as a possible danger. It applies to those not uncommon emergencies which always arise in the middle of the night when laboratory data on blood sugar and so on are not available—in the patient with a neglected strangulated hernia who is rushed to the hospital at 2 a. m., and just as everything is ready in the operating room the junior intern reports happily that the urine is loaded with sugar and that there is a strong Gerhard's reaction, and plenty of albumin. Delaying the operation to permit time for the control of acidosis is not always possible. The thing to do in this sort of emergency is clear: to proceed with the operation and while the patient is on the table to give a good sized dose of insulin, 100 units perhaps, half of it intravenously. This should be followed in an hour by an intravenous injection of 25 Gm. of dextrose, to be repeated hourly until samples of urine are obtainable. In one of these surgical emergencies (intestinal obstruction due to volvulus) from 400 to 600 units of

insulin was used daily for five days to avoid coma. But the patient did not go into coma and recovered from the operation. There is no difference in principle in the management of diabetic coma. The procedure is to give adequate amounts of insulin, and adequate amounts of dextrose, with attention first to the acidosis, letting the glycosuria wait. With patients in coma there is one other consideration that may be of great importance; namely, dehydration. The patient may have taken little or no water for hours and the tissues are in consequence dried out. It is Foster's practice to give saline solution by hypodermoclysis, at least 2 liters in the first twelve hours. He never gives this intravenously because of the sudden burden it imposes on a doubtful heart. The use of insulin in the ordinary case of uncomplicated diabetes is relatively simple. A normal person can take from 5 to 10 units of insulin with no notable effect. From 10 to 20 units a couple of times daily is an ideal way to stimulate the appetite. In the hospital, Foster uses insulin as a means of shortening the hospital period. It saves time to give a patient a maintenance diet and to use insulin for a few days to clear up the urine and bring the blood sugar down to normal rather than to begin with a very low diet and then gradually raise it to maintenance level. This procedure is unnecessary when time is of no consideration. Foster sums up the treatment of diabetes in three words: precision, individualization, boldness.—Journal A. M. A.

NEWER ASPECTS OF THERAPEUTICS OF VIOSTEROL (IRRADIATED ERGOSTEROL)

In the course of a test made by A. F. Hess, J. M. Lewis and Helen Rivkin, New York, of a large number of infants, it was found that although viosterol, in its present dosage, conferred protection against rickets, some evidences of this disorder were evident in a small number of cases. No hypercalcemia or other untoward symptoms developed. The cases that showed signs of mild rickets were remarkable for the fact that the inorganic phosphorus of the blood was maintained at its normal concentration; in no instance did the phosphorus fall below the normal level. This peculiar manifestation—rickets associated with undiminished inorganic phosphorus—was noted last year when irradiated milk was given. It was brought about also in animals by feeding inadequate amounts of viosterol. A clinical experience of this kind indicates that an analysis of the blood for inorganic phosphorus may be misleading and that, when viosterol is being given, the presence of rickets will have to be determined by clinical signs and the roentgenogram. It shows also not merely that rickets is a systemic disease but that local factors may play a determining role in calcification at the epiphyses. Furthermore, it emphasizes the fact that the product of the calcium times the phosphorus concentration in the blood is not a reliable indicator as to whether or not active rickets is present. The present method of irradiation of ergosterol possibly elaborates a factor which increases the inorganic phosphorus in the blood, quite apart from any antirachitic action. Viosterol is a remarkable curative agent for rickets. It is absolutely reliable, very rapid in its action, and never associated with the development of hypercalcemia. The present method of standardizing viosterol on the basis of "cod liver oil units" is founded on the false premise that the action of cod liver oil and of viosterol is the same in infants as in rats. A better method would be to compute the potency directly either as protective or as curative "rat units." The dosage of viosterol should be increased from two and a half to three times. This can best be accomplished by increasing the strength of the solution.—Journal A. M. A.

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BIRTH INJURIES FROM THE STANDPOINT OF THE ORTHOPEDIST*

C. E. BADGLEY, M.D.†
DETROIT, MICHIGAN

For years, orthopedic surgeons have inherited the care of the child, crippled by trauma at birth. Some success, in the treatment of the disabilities of these unfortunates, has naturally given to the orthopedist an opportunity to see a larger number of cases of birth injury, than would fall to the lot of the most unfortunate obstetrician. The incidence of birth injuries in the practice of the capable obstetrician is very low, but the results of injury at birth play an important part in the practice of the orthopedist.

It is, therefore, not surprising that W. J. Little, the pioneer orthopedist of England, was the first to blame intracranial birth injury for the production of spastic paraplegia. Today Sever, with his great experience with

obstetrical palsy, pleads for prevention of this birth injury.

The orthopedist has long recognized his inadequacy in the treatment of the two most important results of birth injury, namely spastic paralysis and obstetrical palsy. The permanent central nervous system lesion so damages the neuro-muscular mechanism, that restoration to normal function in many of the cases is an impossibility. Although

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certain orthopedic procedures may greatly improve function, it is obvious that the ideal to aim for would be their prevention at birth.

Recent literature demonstrates the interest of the obstetrician in the study of prevention of birth injury, and leads to a feeling of optimism, that these obstetrical tragedies will greatly diminish in the future.

The more frequent birth injuries which call for orthopedic treatment are:

- (1) Birth fractures
- (2) Obstetrical palsy
- (3) Spastic paraplegia
- (4) Torticollis

More rarely, a lesion of the spinal cord may be seen. Crothers gives the high ratio of 26 spinal cord lesions to 216 brachial plexus paralyses. Injuries to the bodies of the vertebræ have infrequently been reported, but it is very probable that many of the so-called "congenital scolioses" are the result of birth injury to one or more vertebral bodies. I, also, believe it possible that the rare cases of fusion of several bodies of the lumbar spine may well be due to a compressing force, damaging the cartilaginous intervertebral discs, so that bony ankylosis between several bodies results.

Birth fractures are not commonly seen. Fractures of the humerus are the most frequent. Truesdell reports an incidence of 39 fractures of the humerus in 33,000 deliveries, 24 of the fracture cases occurring in breech deliveries. The birth fracture is not a green stick fracture, as a rule, but there is a sharp break with a complete solution of continuity. The most usual site of fracture in the humerus, according to Truesdell's series, is just below the deltoid tubercle which, anatomically, explains the high frequency of radial nerve palsy seen in his reported cases. The radial nerve passes directly below this point to reach the lateral surface of the arm. The nerve damage is generally primary, although, rarely, a secondary lesion to the nerve by excessive callus, has been reported. The nerve lesion of primary origin will generally clear up spontaneously; if due to excessive callus a neurolysis of the nerve will be required.

Fractures of the clavicle are also common birth fractures, probably far more common than is recognized, due to frequent failure to diagnose the lesion. The symptoms are very mild generally and rarely is the frac-

ture accompanied by any serious consequence.

Fractures of the femur are the third most frequent birth fracture, and, like the fractures of the humerus, most commonly seen in breech cases. The fracture is usually in the middle third, or at the junction of the upper and middle thirds of the femur with the resultant displacement of the fragments in the typical anatomical position of the type of fracture, namely flexion and abduction of the upper fragment. Epiphyseal separations of the femur are rarely reported, but I have seen one case of epiphyseal separation of the upper end of the femur.

Fractures of the forearm and of both bones of the leg occur much less frequently.

In the treatment of birth fractures, it is essential to remember the great principle known as Wolff's law, which, simply stated, means that growing bone has the power to repair itself according to the stress and strain placed upon it. Truesdell unknowingly emphasized the importance of this law in his study of malunited birth fractures. By X-ray studies of a series of birth fractures from birth to four years of age, he observed the most marked angulation of the shafts gradually straighten out by proper deposition and absorption of bone until, at the end of the fourth year, the deformity had completely disappeared.

Although accurate reposition of the fragments in correct alignment is not so essential in birth fractures, in the femur one must aim to maintain length. There is some evidence that there may also be a compensatory attempt to make up for the shortening if over-riding of the fragments has occurred, but it is doubtful if full length will result. I believe the most important point to observe in birth fracture of the femur is maintenance of full length.

The treatment of birth fracture of the clavicle is very simple—no splinting is required. If the fragments tend to displace or move when the child moves its arm, a Lund swathe to immobilize the arm for a week may be applied. The natural position of the infant in bed on its back is the ideal treatment for the fracture. Nursing care and daily bath may be given without fear of damage.

Fractures of the humerus may be treated by Truesdell's method of an axillary pad,

and a Velpeau dressing with the injured arm splinted against the thorax and the hand on the opposite shoulder.

Fractures of the femur are more difficult to treat, for it is essential not to truss up the child so that nursing is difficult. Splints should not interfere with the proper changing of napkins. Yet we believe it essential that over-riding of the fragments be prevented and this will require some form of extension.

The usual type of birth fracture of the femur has a displacement of the fragments that is best aligned by placing the leg in abduction with the thigh flexed beyond a right angle, and the knee flexed to a right angle. This is also a natural attitude for the infant, and so is a comfortable one. We believe the wire splint as utilized by Blair is the best to employ. The wire passes across the back just below the scapulæ, a lateral piece then passes along the side to the greater trochanter, here it is angled to a little more than a right angle and extends to the knee, where it is again flexed to right angles. It then passes lateral to the leg extending beyond the foot for four inches, then along the inside of the leg, passes anteriorly above the pubis to the opposite side, where it is carried across the back to its starting place. Traction on the infant's leg by means of moleskin adhesive or glue may be applied. This is then fastened to the bottom of the splint with a soft rubber tube so as to keep constant traction. The splint can then have an extension force placed on it by a pulley arrangement to the base of the bed, which could be removed for the short period needed for nursing.

Brachial plexus palsy has long been regarded as a primary lesion to the roots of the brachial plexus. This contention seems to be well supported by the distribution of the paralysis resulting. Also, experimentally, proof of the possibility of tearing of the plexus roots can be demonstrated. T. Turner Thomas and others have contended that the high frequency of posterior subluxation of the affected shoulder demonstrates the possibility of a *primary* shoulder injury in certain cases associated with a secondary peripheral brachial plexus injury resultant from hemorrhage organizing in the sheaths of the nerves and thus interfering with their function. However, this deformity can well be explained by the con-

traction of the unaffected muscles of the shoulder.

For practical purposes brachial plexus injuries may be divided into the upper arm type, or Erb's palsy, and the whole arm type, or mixed type. Rarely is seen Klumpke's lower arm type. These types vary in intensity from a very mild involvement, which rapidly clears up completely, to a very severe form of permanent palsy. The upper arm type involves:

- (A) The external rotators—
Teres minor
Infraspinatus
- (B) The abductors—
Deltoid
Supraspinatus
- (C) Flexors of the elbow—
Coracobrachialis
Biceps
Brachioradialis
Brachialis anticus
- (D) Serratus anticus

The whole arm type involves, in addition, the muscles of the forearm and hand. In the whole arm type of paralysis there is frequently evidence of damage of the sympathetic fibres from the deep cervical ganglionic plexus, demonstrated by unequal pupils and narrowing of the palpebral fissure. Sever states that if there is evidence of sympathetic involvement, the prognosis is poor, and such is our experience.

The resultant deformity which occurs in Brachial plexus palsy is not due alone to the paralyzed muscles but is maintained by the physiological contraction of the no longer opposed antagonistic muscles. The strong internal rotators of the arm and the adductors hold the shoulder in marked internal rotation and adduction. This position favors posterior dislocation of the head of the humerus, exactly as flexion, adduction and internal rotation of the hip favor dislocation of that joint.

If the deformity is not prevented, the hand and forearm are greatly decreased and little use can be made of the extremity. In the uncorrected case, Wolff's law again is demonstrated in the failure of the arm to grow from disuse, and in bony malformation such as hooking of the acromion and posterior displacement and overgrowth of the head of the radius.

It is essential that the contracture be prevented from development in all cases, not

only to prevent these deformities, but also because they prevent or diminish the return of function of the paralyzed muscles, just as overwork or contractures prevent return of function in the infantile paralysis case.

Early surgical exploration of the brachial plexus has proven unsatisfactory. Their percentage of cures is no higher than those treated conservatively. It is the consensus of opinion that three to six months conservative treatment should first be employed; if then there is no indication of return of function, exploration of the plexus should be made, without, however, much optimism as to the results.

The conservative treatment consists primarily in maintaining the arm in abduction, external rotation and supination. Exercises are employed preceded by heat and massage. Mild galvanic stimulation skillfully applied is of aid. If there is a posterior dislocation of the head of the humerus it should be reduced in the early case by manipulation; in the late untreated case open operation will be necessary.

Under this form of treatment, the majority of upper arm type will respond excellently. The lower arm type is much less successful.

The late untreated case can be greatly improved by Sever's modification of Fairbank's operation, which consists in operatively freeing contractures so that the arm may be placed in the position mentioned for the early case.

Spastic paralysis is a too frequent orthopedic problem. In our crippled child clinics throughout the state it is not at all uncommon to have 20 to 30 per cent of the patients attending the clinic present this condition. The most serious aspect of the problem is the mental damage, which is frequently very marked. Athetosis is also a frequent result of this entity, which complicates the treatment.

The recent literature proving Little's contention that intracranial birth injury is the chief factor in the production of these cases puts the problem of *prevention* up to the obstetrician. If he could but see them with the frequency of the orthopedist, he would carefully regard every difficult labor as a potential intracranial risk, and would consider the wisdom of intervention from this angle in addition to his usual indications.

It is true that all cases of spastic paralysis are not the result of birth injury, but un-

doubtedly a large percentage are. Jensen, in a careful analysis of the birth histories of 152 children with spastic paralysis, proved that 65 per cent were firstborn, the last stage of delivery was pathologic in 50 per cent, and that the children—chiefly underweight and premature—had been born deeply asphyctic with every symptom of traumatic intracranial hemorrhage. Also, he showed that, from an etiological point of view, familial dispositions, syphilitics and postnatal infections have but little importance compared with birth trauma, and traumata and hemorrhage arising during the first months of pregnancy.

Orthopedic surgery has much to offer the spastic paralysis patient who has sufficient mentality to help himself. The athetosis cannot be improved. The severe mental case should be institutionalized. There may be sentimentalists who refute this statement, but let them see the home life of the parents and their other children sacrificed for the sake of the unfortunate vegetating animal, whom they think it their duty to rear as a human being.

The treatment is based on the recognition of the fact that spastic paralysis is not true paralysis, but is a pseudo-paralysis produced by a constant overflow of spinal stimuli to the muscles of the affected extremities. All of the muscles so stimulated go into contraction; the stronger muscles contracting against the weaker ones produce a firm contracture, which so tends to stretch and tire out the weaker groups that to a greater or less extent they are paralyzed.

The treatment aims to relieve these contractures, to re-establish the strength in the weaker group and to restore muscle balance, if possible. Coördinate movements will remain difficult because of the failure of the brain mechanism to properly instruct the antagonistic and synergistic muscles to relax and contract properly. For this reason, the greatest success will be in the less complicated mechanism of the lower extremities. The upper extremities can be improved, but finer movements will be difficult to obtain.

In the mild case, exercise to develop the weak groups, educational methods to develop rhythm and balance are employed. These methods are also used after operation in the more severe cases.

The operative treatment consists of four possible avenues of attack:

(1) The deformities and muscle unbalance may be corrected by tenotomies. This weakens and lengthens the contracted strong group and gives a period for the re-development of the pseudo-paralyzed group. This method is particularly of value in the equinus deformity but emphasis must be placed on the prevention of overcorrection, as a severe deformity more disabling may occur.

(2) The frequent recurrence of the deformity has led to the development of a more permanent correction by division of a portion of the nerve enervation to the contracted muscle group. Stoffel has demonstrated a fairly constant topography of the motor nerves, and the nerve supply to individual muscles can be isolated and a portion of the motor nerves supplying the muscle be removed to restore balance. This is a successful method, but requires exactness in the amount of nerve supply necessary to remove. Temporary damage to the nerve by crushing or by alcoholic injection has also been employed successfully.

(3) The Förster operation of division of the posterior nerve roots to block reflex afferent impulses has been successful, but the operation is a radical one with no better results than judicious employment of the first two methods.

(4) The fourth operative procedure is the sympathectomy, designed by Hunter and

Royal. Unfortunately, this method does not seem to achieve the promised results and is certainly still an experimental method only. Cerebral decompression has been advised but is rarely of value.

Torticollis has generally been considered the result of a hematoma in the affected sternocleidomastoid muscle from birth injury. There is considerable evidence that this lesion is an intrauterine one, present before birth; the hemorrhage and rupture of the muscle occurring because the muscle was contracted and not the cause of the contracture. Little need be said about this lesion other than to stress the need of early treatment. Wolff's law also holds in this deformity and the uncorrected case develops a marked facial asymmetry in an attempt to compensate for the tilting of the head from the contracture. Continuous stretching of the contracted muscle in the very young may cure it. If conservative methods fail, simple division of both heads of the muscle above the clavicle will produce a cure.

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BIRTH INJURIES FROM THE STANDPOINT OF THE OBSTETRICIAN*

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The possible birth injuries to which the infant is exposed during the course of labor range from minor surface abrasions to serious damage affecting the cerebrospinal system and sufficient to cause death.

Many of the injuries may be caused by the natural forces in spontaneous delivery, but they occur with greater frequency following difficult operative interference. Injuries to the head are seen most frequently and include some of the most important serious traumata encountered, namely, those resulting in intracranial hemorrhage.

The caput succedaneum, while a birth injury, is of minor importance, being merely an edema of the soft tissues which is absorbed within a few days. It results from the difference between intrauterine and extrauterine pressure within the area of the dilating cervix. It must be distinguished

from the less frequent cephalhematoma, which is a subperiosteal hemorrhage usually resulting from instrumental trauma. This latter injury may occasionally occur during spontaneous delivery. It most frequently involves one of the parietal bones and, unlike the caput succedaneum, is limited by the sutures of the bone. It more often appears

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some time after birth and gradually absorbs in a period of several weeks. It may be associated with intracranial hemorrhage and may occasionally become infected.

Skull fractures and depressions of the skull bones may occur due to pressure of the sacral promontory in disproportion or may be caused by the forceps blades in difficult instrumental delivery or breech extraction.

Excoriations or abrasions of the face or scalp usually result from forceps application.

Intracranial injuries are by far the most important and serious of the head injuries, and, while a classification according to location may be made, the importance of the lesion varies also with the extent of the hemorrhage. Hemorrhage may result from rupture of a cerebral or meningeal vessel or it may be the end-result of asphyxia. Hemophilic tendencies in the child with minor trauma and prematurity with thin skull bones and delicate blood vessels constitute predisposing factors. The important symptoms are weak cry, cyanosis, or pallor, tense fontanel, refusal of food, periods of restlessness, twitching of muscles and tremors alternating with periods of apathy and abnormal respiration such as shallow rapid breathing. Convulsions are usually indicative of extensive brain tissue damage and usually mean a grave prognosis. The results of cerebral hemorrhage if the child lives may be complete recovery, or one of the cerebral developmental defects may be manifest such as hydrocephalus, epilepsy, idiocy, spastic paraplegias, convulsions, or a combination of two or more of these.

Facial paralysis may result from peripheral or central injury. The most common type results from pressure of the forceps on the facial nerve as it passes through the parotid gland and is usually unilateral. Function is usually restored after a few hours to a day or two.

Injuries to the vertebræ and spinal cord most commonly occur during difficult breech extractions and are due to the employment of exaggerated torsion and hyperextension of the spine. Dislocation of the atlas on the axis, fractures or separation of epiphyses of cervical vertebræ and more rarely injury to the thoracic and lumbar sections may in turn through pressure injure the cord or there may appear damage to the cord without apparent injury to the bony structures. The

more serious cord injuries produce flaccid paralysis below the lesion.

Erb's paralysis is usually a traction lesion of the 5th and 6th motor roots of the brachial plexus and is manifested by the characteristic limp arm, rotated inward with flexed fingers, and inability to flex the forearm.

Fractures of the clavicle, humerus and ribs are not uncommon—many clavical fractures escape notice. They are due to direct trauma during extraction of the after-coming head in breech presentation or following version. Fractures of the humerus result from trauma in delivering the arms in breech extraction. Rib fractures are less common but may occur in strong traction and torsion when delivery is attempted through an incompletely dilated cervix. Excessive force in bringing down a leg in frank breech may result in fracture of the femur or separation of the epiphysis.

Lacerations or rupture of the abdominal viscera are not common and result only from violent efforts at extraction, except in cases with pre-existing factors such as prematurity, asphyxia, vascular fragility or disease of the organ such as syphilis.

Not strictly to be classed as a birth injury but a possible result of trauma due to the various methods used in wiping out the mouth of the newborn, may be mentioned aspiration pneumonia.

In Detroit in 1928 there were 32,421 live births and 1,395 stillborn babies, or approximately one stillbirth for every 24 births. 1,242 babies that were born alive died under one month of age, or one baby for every 27 births. Of the 2,637 babies that were either stillborn or died in the first month only 184 were reported as having died from birth injury, or one reported injury for every 14 dead babies, that is 7 per cent.

If we compare this with the results of autopsy findings in one hospital where 79 autopsies were done in the past eight years on stillborn infants and those dying in the hospital in the first few days of life, we find that 14 of the 79 died of birth injuries, or 17.7 per cent. Of these 14 injuries, 12 were intracranial hemorrhage or tears of the tentorium.

Of 1,383 deliveries in 1926 at the Herman Kiefer Hospital, Detroit, there were 1,260 full term live babies and 104 premature live babies, of which 10 full term and

19 premature died between the first and twelfth day. There were 19 full term still-born non-macerated babies, 7 premature still-born non-macerated babies, 10 full term still-born macerated, and 12 premature stillborn macerated. Of the 29 full term babies which died or were stillborn, there were 9 autopsies, and of the 26 premature babies that were stillborn, or died, there were 10 autopsies. In the 19 autopsies performed birth trauma was found as the cause of death in 3 full term and in 3 premature babies that were autopsied or in 23 per cent.

The types of injury found at autopsy were one subtentorial hemorrhage following spontaneous delivery, one cerebral hemorrhage following mid forceps delivery, one trauma not classified from version and extraction in contracted pelvis, one rupture of liver following spontaneous delivery of premature infant, one intraventricular hemorrhage following spontaneous delivery in a premature infant and one unclassified trauma from breech extraction of premature infant. The types of injuries sustained by full term infants delivered spontaneously which recovered and left the hospital alive were intracranial hemorrhage 4; fracture of clavicle 2; cephalhematoma 1.

The injuries resulting from operative deliveries and sustained by premature infants who recovered and left the hospital alive were fracture of humerus following breech extraction 1; facial palsy from low forceps delivery 1; facial palsy from mid forceps delivery 1.

Among 59 babies which died or were stillborn from causes other than injury, but upon which autopsies were not done, there were 10 reported as asphyxia; 3 unknown cause; 4 abruptio placenta; 2 eclampsia in the mother; 1 placenta previa; 1 ruptured uterus; 1 craniotomy on dead fetus; 8 prematurity; 22 macerated fetus; 1 passive congestion; 4 congenital deformity, 2 congenital syphilis.

A comparison of the percentage of birth injuries reported in this series of babies which died or were stillborn with the percentage of reported birth injuries in babies which died or were stillborn in the entire city of Detroit, shows a very slight difference. This may be accounted for by the fact that a relatively small number of autopsies were obtainable in the series. Undoubtedly, trauma played an important part in many of the cases reported as having

died of asphyxia, prematurity and unknown causes.

The burden of responsibility in preventing birth injuries in the child as well as in bringing the mother safely through her confinement rests upon the obstetrician. Prenatal care has done a great deal toward making childbirth safer for the mother, but it must be supplemented with competent attention during the first stage of labor and skillful management of the delivery in order not to deny the mother a physically and mentally sound baby.

Forceps may greatly increase the fetal mortality and birth injuries when used indiscriminately. Incorrect diagnosis of position, attempts at delivery through an undilated cervix, too forcible traction and rotation, all tend to increase the incidence of trauma.

Version and extraction is a valuable procedure when there are definite indications for its use, in the absence of disproportion between the head and pelvis. When this operation is employed after attempts at forceps delivery have failed due to disproportion, or when it is done without a proper regard for the normal mechanism of breech delivery it frequently results in either a stillborn or injured child. The incidence of fetal mortality following version and extraction is as high as 40 per cent in some of our hospitals.

The use of pituitrin to force an unmoulded fetal head through the birth canal is without doubt a factor which increases the incidence of intracranial injuries and the fetal mortality.

The use of various types of analgesia has a tendency to prolong labor and thereby increases the frequency of operative interference.

The prognosis of dystocia may be anticipated at the first antepartum examination in a more or less clearly defined class of patients.

The women are frequently stout at the beginning or gain 40 pounds during the pregnancy. They are apt to be short and thick set with heavy bones. The pubic arch is often narrow, approaching the male type and all the measurements are at or near the low limits of normal. The diagonal conjugate diameter may usually be reached. The parts are rigid with a muscular perineum and rather narrow vagina.

These patients sometimes have ovarian,

thyroid, or pituitary disturbances evidenced by histories of delayed and rather scanty menstrual periods: Not infrequently there is a past history of sterility—the patient having been married several years before becoming pregnant. The blood pressure is apt to become elevated and some are subject to toxemia or eclampsia. Others go beyond term and tend to have large babies with no lightening before the onset of labor.

During labor the pains are often of short duration but come at frequent intervals from the beginning. The patient complains throughout labor of severe pain yet the progress is extremely slow. The membranes rupture early and there is little dilatation of the cervix and the head remains high. If the head enters the pelvis at all it engages in the transverse diameter or with the occiput posterior.

The length of the labor and the mechanical difficulties encountered in operative delivery from below by either version and extraction or forceps result usually in deep

lacerations of the mother and not infrequently in injury or a stillborn fetus.

DeLee has given the name "dystrophica dystocia syndrome" to this class of difficult labors and suggests that early cesarean section might have been the operation of choice in the management of a certain percentage of the patients.

When disproportion exists it is of the greatest importance to recognize it early and to perform cesarean section as an elective procedure after a reasonable test of labor.

Only by making a complete and accurate diagnosis during labor can we know when to use interference that will succeed in abnormal cases, and, in recognizing the normal, know when to wait for spontaneous delivery.

The methods of hastening labor such as manual dilatation of the cervix and version and extraction, routine forceps delivery and the use of pituitrin add to the incidence of birth injury.

BIRTH INJURIES FROM THE STANDPOINT OF THE PEDIATRICIAN*

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The invitation to speak to this group on the subject of birth injuries has appealed to me as a real responsibility. As a pediatrician, I welcome it because it affords an opportunity, first, to express our admiration of the excellent obstetric practice in our section of the country, and, secondly, to make clear the dangers which we feel attend a seemingly normal delivery.

VIABILITY OF FETAL NERVOUS TISSUE

There is apparently some misconception as to how long nervous tissue can survive after placental circulation has been shut off. Experiments of Stewart, Guthrie, Burns and Pike, and Gomez and Pike would indicate that the cells of the cerebral cortex can resist total anoxemia for ten minutes and those of the medulla for twenty minutes. Crothers deduces from this that since these experiments were performed on adult animals the central nervous system of the infant

could probably resist total anoxemia for more than twenty minutes. In addition to this consideration we must also realize that we have practically no evidence that the placental circulation is ever completely occluded, and also that the fetus is possessed of an independent circulatory system.

If these considerations as emphasized by Crothers are true it will be necessary for us to modify our conception of the frequency with which asphyxia occurs. It seems more logical to assume that the lowered excitability of the medulla expressing itself in the clinical picture which we recognize as asphyxia is more commonly due to trauma or to impaired circulation resulting from increased pressure about the medulla than to anoxemia due to occlusion of the placental circulation.

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RELATIVE IMPORTANCE OF NERVOUS STRUCTURES TO LIFE

It is well known that one or both of the cerebral hemispheres may be removed from an animal without disturbing the respiratory function or its reflex activity. The cervical cord may be severed below the level of the phrenic nuclei without interfering with life. Should the medulla or the phrenic nuclei be damaged, however, even as though by a hemorrhage, during such experiments, the respiratory function ceases and the animal dies. It would seem then that a normal medulla and an intact upper cord are necessary for life. These are the essential points to be protected from damage during delivery.

We will now consider the structure of the fetal cranio-vertebral cavity with a view to understanding the mechanism which nature has erected to protect these vital structures from the forces imposed upon the vertex during labor.

The cranial cavity is divided by the dural septa into a supratentorial chamber, which in turn is divided in two by the falx, and separated from these by the tentorium is the subtentorial chamber. These septa, which are really reflexions of the inner periosteum of the skull, arise from the neighborhood of the large venous sinuses. The falx cerebri descending from the superior longitudinal sinus above is attached anteriorly to the crista galli of the ethmoid and runs back to a strong insertion in the midline of the tentorium, either half of which arises from the region of the lateral sinus. The falx cerebelli arises from the region of the occipital sinus. These septa meet in the region of the torcular herophili. About the large sinuses which channel these periosteal reflexions, the latter are especially strong and are firmly attached to the bone.

These septa are not of uniform strength, but are reinforced by strong bands of fibrous tissue, which are so placed as to withstand the strain to which they may be subjected by the moulding of the fetal head. How efficiently these bands are placed may be best illustrated by the accompanying semidiagrammatic drawings from Holland's paper. The first illustrates the fibres which particularly resist vertical compression with antero-posterior elongation of the head. It shows clearly the strong band arising at the point of union of the falx cerebri and the

tentorium cerebelli and running downward and backward along the floor of the straight sinus. It shows one of the deep horizontal bands of the tentorium running forward to its insertion on the anterior clinoid process. Note also the mass of fibrous tissue about the torcular herophili which serves as a strong anchor for these septa. The second figure illustrates the disposition of the fibrous bands which resist antero-posterior compression with resulting vertical elongation of the head. Note particularly the anterior vertical band of the tentorium which is particularly subjected to strain.

These figures of Holland's illustrate admirably how the dural septa are designed to resist cranial distortion. It must be emphasized, also, that they are equally well designed to control intracranial pressure. Since the bones lining the supratentorial chamber constitute a soft and compressible wall, while those lining the subtentorial chamber are quite rigid, it will be seen that the latter is a rather secure residence for its contents. In other words, the septa not only prevent dangerous distortion of the head but, as Crothers has stated, prevent the forces imposed on the vertex from acting directly on the subtentorial contents.

We have then the supratentorial chamber containing the two hemispheres, in the midst of which are the ventricles containing a small amount of fluid, the opening in the tentorium containing the midbrain and the subtentorial chamber containing the cerebellum, pons and medulla—the latter protected from the walls of the foramen magnum by the subarachnoid space, which is dilated at this point into the cisterna magna.

The spinal column of the infant consists of cartilaginous rings held together by rather fragile ligaments. The spinal cord is strongly fixed in the cervical region by the large roots of the brachial plexus and is firmly anchored below by the cauda equina. Its lining membranes are held to the walls of the cavity by fibrous bands. These considerations are of importance because it has been shown that the length of the spinal column can be altered by compression and traction, a matter of about two inches, and it is apparent that the caliber cannot be appreciably altered. It is important to note that in the thoracic region the cord is rather weakly supported by the thin roots of the thoracic nerves.

NATURE OF FORCES

We will now consider the nature of the forces to which the fetus is subjected. During the early part of labor and up to the point of rupture of the membranes there is pressure which although intermittent is uniform in its application to the fetal head. These forces are a resultant between the powers of labor and the resistance of the maternal passages. The result is a cranial stress which consists of two elements: (a) a general compression of the whole head and (b) a longitudinal compression acting at the ends of the long diameter of engagement in the pelvis. This latter is the most important stress from the present consideration. In all types of vertex presentations and in breech presentation, it results in a decrease in the antero-posterior diameter of the skull with a corresponding lengthening of the vertical diameter. The reverse is true in face and brow presentations, where there is a shortening of the vertical diameter and a corresponding increase in the anteroposterior one. In breech presentations there is a modification of this stress, in that it is applied suddenly. Here, also, we frequently have the added force of traction, which, necessary though it frequently is, is certainly unnatural and probably unphysiological. How traction subjects the fetal central nervous system to additional strain will be described later.

The effect of this pressure upon the contents of the cranial cavity is a matter of some dispute. Leonard Hill first advanced the theory that the pressure changes did not correspond to those expected where a fluid completely fills a rigid container. This whole matter has been carefully studied by Crothers and by Blackfan, Crothers and Ganz, the latter studies consisting of simultaneous manometric observations from the ventricles and spinal canal of hydrocephalic patients. They conclude that the application of the "closed box" theory to the pressure changes in the infantile cranial cavity is unsound. Crothers' conception of the sequence of events is that as pressure is applied to the compressible fetal vertex some of it is absorbed by the gelatinous cerebral hemispheres. The ventricular fluid is soon expressed into the cisterna magna. The pressure of the uterine contractions being uniform at this point raises the pressure in

the subtentorial chamber and this factor, together with the unimpaired tentorium held in place by the falx, prevents the forces imposed on the vertex from acting upon the subtentorial contents.

This elevation of pressure in the subtentorial chamber undoubtedly impairs the circulation about the medulla at least partially and if unduly prolonged will probably account for some loss of excitability of this organ expressing itself in asphyxia. It can hardly produce complete anoxemia, however, and would scarcely cause irreparable damage except in the most prolonged labors. It is apparent that should a rupture of one of the dural septa occur, it would permit the descent of the tentorium and permit the application of the forces imposed on the vertex to act directly on the subtentorial contents. When this accident occurs the medulla is frequently driven against the anterior lip of the foramen magnum. This is probably the mechanism by which damage to the medulla most frequently occurs.

Obviously the rupture of one of these vascular dural septa will frequently lead to hemorrhage, and, in a majority of cases dying of cerebral hemorrhage, such tears will be found on careful search. It must be emphasized, however, that a sufficient tear may occur, even without hemorrhage, to permit the descent of the subtentorial contents, with possibly fatal damage to the medulla. At other times hemorrhage alone occurs, and it is from this group that the surviving cases of birth injury are derived.

Let us now consider what modification of these forces occurs in breech delivery. Here we have not only pressure, but pressure which is applied suddenly to the head and in addition to this all too frequently traction is superimposed. As has already been shown, the spinal chamber is an expansible tube, the caliber of which cannot be appreciably altered; traction produces, therefore, a lengthening of the spinal chamber with a resulting increase in its capacity. There is, therefore, an immediate flow of spinal fluid downward while at the same time the compressible fetal vertex is subjected to sudden pressure. In other words, as Crothers has emphasized, all the forces are directed downwards, which is the most dangerous direction. It would be expected from these considerations that ruptures of the dural septa with resulting damage to the medulla

would occur much more frequently in breech than vertex delivery.

In addition to this, we must also realize that traction so applied subjects certain portions of the fetal anatomy to strains which they can experience in no other way. The weakest portions and those most likely to suffer damage are the cervical vertebræ, the spinal cord and the nervous trunks emerging therefrom. That damage frequently occurs in such a manner has been shown by numerous writers, including Ruge, Spencer, Hofbauer, Stoltzenberg, von Reuss, Capon and Pierson.

From these anatomical considerations, we would expect damage to the fetal central nervous system to occur in one of several different ways. First, cranial distortion may produce a rupture of one of the dural septa, resulting in hemorrhage. Secondly, whether hemorrhage occurs or not, such an injury will destroy the barrier to continuity of pressure and the medulla may be forced into contact with the foramen magnum. This is particularly likely to occur in breech deliveries where traction is employed, because here we have the additional downward force, resulting from the sudden flow of spinal fluid into the enlarged spinal subarachnoid space. Thirdly, rupture of the cervical cord may occur in breech deliveries or it may be damaged from hemorrhage resulting from a fractured cervical spine.

Abundant pathological evidence has accumulated that such injuries frequently occur.

Beneke was probably the first to emphasize that the safety of the medulla seems to depend upon the ability of the dural septa to withstand the forces exerted on them. Crothers analyzed a number of pathological reports, particularly those of Beneke, Meyer and Hauch, and Holland. This analysis showed that tears of the dural septa can be found in almost one-half of all babies dying during or within a few months after delivery. It is important to emphasize that in a considerable proportion of these, evidence of hemorrhage could not be found, although tears of the dural septa were demonstrable.

Vischer, in a careful study of cases of cerebral hemorrhage, found tears in eighty

per cent, forty per cent occurring in breech deliveries. In other words, about forty per cent of the fatal damage occurs in five per cent of the deliveries or is eight times as common in breech as in vertex deliveries. Holland showed that a torn tentorium was found in fifteen out of seventeen dead breech babies born without serious difficulties, and twenty out of twenty-eight dead babies delivered by version.

Pierson, in 1923, reported the results of his investigations of deaths occurring after breech extraction at the Sloane hospital during a period of thirty months. He found that in one hundred and forty-two primary breech deliveries, death occurred in eighteen, or twelve per cent. The incident of breech deliveries during this period was three per cent. In eighty-seven babies delivered by version and extraction, death occurred in eighteen, or twenty-six per cent. Of these thirty-six cases, spinal hemorrhage was noted in seventeen, or forty-seven per cent, and fractured vertebræ in fourteen, or thirty-eight per cent.

The pathological evidence is difficult to correlate for the reason that a uniform technic is not employed by pathologists. The future will probably reveal to us how frequently these injuries occur and the incidence of the various types. Pierson, Holland, Crothers and Adair have emphasized the need for a complete pathological technic in searching for evidence of traumatic injury. Unless a head is properly opened, tears of the septa and even sizable hemorrhages may well be overlooked, and certainly broken necks will not be found unless they are looked for.

CONCLUSION

Anatomical, physiological and pathological considerations force the conclusion that birth injuries result commonly from trauma and rarely from asphyxia. Probably nearly all fatal injuries are traumatic. This trauma may result from the normal forces of labor, particularly in premature infants. Trauma is more likely to occur when traction is employed.

BIRTH INJURIES FROM THE STANDPOINT OF THE
OPHTHALMOLOGIST*

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Birth trauma concerns the ophthalmologist in three ways: First, the obvious external injuries to the lids and eyeballs; second, retinal and intra-ocular hemorrhages; third, the late results from intra-ocular hemorrhages and intra-cranial injuries to the visual tracts, muscle centers or associated centers as they relate to the eyes.

The obvious external lesions of the eye and lids from trauma, etc., need only be mentioned, such as contusions and tears of the lids. Almost never does the eyeball receive direct injury.

The second group of eyeball injuries are those secondary to increased intra-cranial pressure and trauma—retinal hemorrhages. These are common in the new-born infant. Percentages have been given from six to eighty. Unless the infant's eyes are examined within twenty-four hours from birth with widely dilated pupil and with the aid of a speculum, the percentage results are liable to vary. It has been suggested that the presence or quantity of hemorrhage present might serve as an index of the severity of the labor or as an index as to the value of the kind or method of application of the forceps. Conflicting testimony now exists in these respects. It is said by some that difficult and prolonged labor produces no more hemorrhages than normal labor. I know of no study wherein the amount of intra-ocular hemorrhage has been used as an index to determine the most favorable position for application of the forceps.

It might be interesting to mention some observations we are now making at Harper Hospital on infants delivered after premeditated cesarean section, that is, the mother having had no labor. Too few patients have been studied to reach any conclusions, but so far infants have been free from intra-ocular hemorrhage, and it is possibly fair to assume that, if hemorrhages are found, they will be fewer and in lower percentage than in usual labor cases.

As far as the eyes are concerned, intra-ocular hemorrhage in the new-born disappears in time without leaving permanent ill effects, except in the small, uncommon group having large hemorrhage in the macular region. This type of hemorrhage, through

a resultant scar, interferes with vision in that eyeball.

In the third group are the remote effects from brain injury; extra-ocular muscle paralyzes, ptoses of the upper lid, nystagmus, defective sight or blindness from tract disease and disturbances in associative psychic mechanism. We have not sufficient material to explain the remote results of intra-cranial injury and hemorrhage to the basal visual pathways and ocular muscle nerve centers. We can only conjecture what is known to exist, namely, that brain hemorrhages and lesions do exist commonly from birth trauma in normal and pathological labor, and it is likely that congenital paralysis of the extra-ocular muscles has birth injury as one cause. Immediate examination of the brains of stillborn infants bears out this assumption, in that there are hemorrhages in such infants.

Capper reviews the literature and finds high frequency of cerebral injury at birth; next to tuberculosis is classified nervous system disease due to cerebral trauma at birth.

Jacobs compared intra-cranial injury and hemorrhage with intra-ocular hemorrhage in fourteen premature and stillborn infants. Four were immature, but they showed practically the same picture as the term babies. Wassermann tests were done and were negative in eight of the fourteen mothers; no evidence of lues was found in tissue examinations of any. All fourteen showed engorged choroid or hemorrhages of the retina; twelve pairs of eyes presented retinal hemorrhages, that is, at least 86 per cent showed intra-ocular hemorrhage. The associated percentage of intra-ocular with intra-cranial hemorrhage was twenty-eight. Fifty per cent had tears of the tentorium.

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Cruickshank, in two hundred mature and two hundred premature infants, finds 80 per cent of the mature with hemorrhage of some form, and 66 per cent of the prema-

ture. In both groups 32 per cent had intracranial hemorrhage. Thirty per cent had tears of the tentorium of the cerebrum or cerebellum.

CASE OF COMPLETE ANURIA FOLLOWING PREGNANCY RELIEVED BY DECAPSULATION OF A SOLITARY KIDNEY

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Mrs. C. B., aged 21, primipara, one week before admittance to Hurley Hospital gave birth to a normal baby at term. Dr. E. D. Rice reported an easy birth on Friday, Feb. 21, 1930. The postpartum condition was good and apparently normal until Monday, when patient had a bad attack of "asthma" as reported by patient's mother. On the fifth day following confinement, patient passed no urine, but felt no discomfort. On the following day, however, she began complaining of pain in right back just below rib margin. This pain became increasingly severe during second day and the patient still was unable to pass any urine as on previous day. It now became increasingly difficult for the patient to breathe. The patient apparently lost consciousness, as the last thing she can remember is the shortness of breath. Her mother stated that she became semi-stuporous and answered questions with difficulty, had difficulty in breathing, blurring of vision and vomited several times. Unable to locate the family physician, the mother called in the evening another doctor (Dr. Perry White), who on two occasions passed catheters into the bladder, but obtained no urine. The patient entered Hurley Hospital at 2:10 A. M. on the twenty-eighth of February, after having passed no urine for 48 hours. The pulse by this time had crept up to 140 beats per minute. There was no edema present. Again a catheter was passed but no urine obtained. After an injection of glucose 10 per cent, she was taken to the operating room.

Operation at 3 A. M. was done under nitrous oxide anesthesia. Assisted by Dr. Rice, I made the usual oblique lumbo-iliac incision. The incision was made along the border of the erector spinatis. The latissimus dorsi was separated and kidney fat exposed. On the left no kidney was present. On the right the kidney was 10 inches by 4 inches by 3 inches, engorged and tense. The capsule was split from pole to pole, and the capsule was stripped back to pelvis of the kidney, and a small Penrose placed and wound closed.

Postoperative: Recovery was prompt. Four hours after operation a catheter was passed and 17 ounces of bloody urine obtained. The pain in the back had disappeared; there was no vomiting, not even nausea, following the operation and the pulse was below one hundred per minute a few hours after operation, and while urine was loaded with 4 plus albumin for 48 hours, the amount of albumin decreased and on the fourth day the urine was 1 plus albumin. The amount of urine passed daily was from 50 to 60 ounces. Following decapsulation there was a marked change and on the twelfth day patient left the hospital for home. Six months later she was apparently in normal health.

With the exception of urologists who occasionally report a case of decapsulation for anuria, following removal of the opposite kidney or decapsulation for essential hematuria, there is a dearth of cases in the recent literature. Most of the textbooks on surgery and post-operative care of patients do

not even mention decapsulation for anuria. This may be explained as a reaction from Edebohl's operation done for chronic nephritis. Practically every case of decapsulation reported as successful has been of the acute cases of anuria with enlarged kidneys.

Hegedius reports a case of anuria in a patient aged 19 who three days previously had had a nephrectomy for tuberculosis and saved the patient by decapsulating the remaining kidney. (1929 Zeitschrift fur urology.)

In January, 1929, G. Nicolich, Jr., reports a successful decapsulation after anuria following nephrectomy for pyonephrosis. (Archives Ital di urologia.)

Abraham Hyman reports a case of fracture of both femur and left elbow with anuria on eleventh day. There was complete suppression. Decapsulation of both kidneys. "Kidney not engorged or glaucomatous, if anything paler than normal." (American Journal of Surgery, April, 1928.)

In Cabot's "Modern Urology," "decorication is only mentioned in connection with polycystic disease of the kidneys. "It would seem to be less effective than puncture of the cysts which in most cases improves renal function by liberation of compressed parenchyma."

Babcock's excellent textbook of surgery, pages 1242, says of decapsulation, "It has been used in acute suppression or anuria in mercurial poisoning and in nephritis."

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"In a few cases a decided but usually temporary improvement has followed."

No mention is made of decapsulation in Nelson's "System of Surgery," nor in Dean Lewis' "System of Surgery."

In the General Surgical volumes of year book of Practical Medicine for the last 21 years, edited by Murphy, Oschner and Graham, there is but one report and that from a German surgeon (Lehman) in 1913. The conclusion was "that in chronic nephritis it is of small value while in oliguria with anuria especially uremia occurring during acute nephritis, decapsulation stops uremic poisonings."

Reginald Harrison, in the *Lancet* of 1896, reported three successful cases, not by decapsulation, but simply by splitting the capsule. The first case was one of scarlet fever nephritis. He operated, expecting to find a suppurating kidney. The kidney had been cut into and instead of pus found, the kidney was found distended with inflammatory products. The urine following operation became more abundant, "the albumin gradually, eventually and completely disappearing." In the second case, expecting to find a stone, he found none. The hematuria pain and albumin disappeared. In the third case Harrison also diagnosed stone, but found instead a swollen, tense kidney with no stone present. All three patients recovered following incision. He concluded that he had cured his patient by relieving the tension of the kidney. The capsule was not separated.

It was in 1903, seven years after the report by Reginald Harrison, that G. M. Edebohls, in the *New York Medical Journal* (June), reported his first successful case of decapsulation for acute uremia. In this first case a woman was in convulsions after delivery, by forceps, under chloroform. The usual treatment of that period being without response, decapsulation was done three days after delivery. No further convulsions occurred and the patient was restored to health in a few weeks. The second operation was for a case with alternating delirium and coma and blindness, almost complete, and complete anuria. Double decapsulation was followed by improvement and spontaneous delivery followed in 48 hours.

In the *Medical Record* (March 22, 1903) Edebohls reports 51 cases of chronic nephritis with fourteen deaths—seven within fifteen days of operation and seven at a

later period. Three of seven were due to uremia, two to acute dilatation, one to pneumonia, and one combined uremia and cerebral hemiplegia. Many of the cases operated were moribund; twenty-two cases were in satisfactory condition between two and fifteen months. Nine patients were cured. One patient with one kidney had a repetition of chronic Bright's disease after four years.

In the *Medical News* (1899) Edebohls reported that he had operated on a woman 20 years of age for mobility of the kidneys, suffering also from interstitial nephritis. Albumin and casts disappeared a month after operation and a year later she was well. Of his 191 patients operated, sixteen had chronic nephritis. His first idea was that nephropexy cured the patient and it was later that he decided that decapsulation had been the efficient agent. Edebohls' conclusion: "I am ready to operate upon any patient with chronic Bright's disease who has no incurable complication or one absolutely forbidding use of an anesthetic and whose probable expectation of life without operation is not less than one month." It seems that Edebohls' idea was, by relief of pressure and establishing of a freer circulation of blood to the kidney, that a cure in chronic interstitial nephritis might be expected. Kelly and Burnham conclude "that Edebohls undoubtedly benefited some of his cases of chronic nephritis, but the best results were obtained in cases with lessened secretion of urine with edema." In three or four cases of chronic interstitial and parenchymatous nephritis our experience does not lead us to hope for success by this method. "Experiments show no permanent betterment of circulation."

Tyson and Frazier reported a case of anuria in a patient who had had scarlet fever four years previously with albumin and general anasarca. After repeated relapses she was operated by decapsulation of the right kidney. Anasarca disappeared and the albumin was reduced below one-half of previous urine. Two months later the left kidney was decapsulated and she continued in apparent good health for a year when she died after exposure during a severe winter.

Irving B. Krellenstein (*Jour. Obstet. & Gyn.*, August 1929) reports a recovery by bilateral decapsulation in a case of anuria of four days duration following the birth of a still-born fetus at term (forceps deliv-

ery). Twelve hours after operation four ounces of urine were obtained from the bladder. Two days later 270 c.c. and 380 c.c. respectively and subsequently normal amounts of urine were passed. In this case the kidneys were described as "slightly enlarged, pale and friable" with slight swelling of hands and feet.

In Bartlett's "Post-Operative Treatment" the advice is given that in anuria following operation, to beware of the mildness of symptoms, not at all suspicious of a grave illness. If after eight hours no urine is voided, active medical measures should be instituted and if these fail, the kidneys should be decapsulated as advised by Dacosta, Edebohls and others. "Comment is made of the fact that ether may light up an apparently normal kidney after operation, depending on age of patient and duration of operation, albumin and cast appearing in the urine on the first and second day following operation."

Osman, in 24 cases of non-obstructive suppression of the urine, found an associated acidosis. Treatment after plasma bicarbonate is known, was 30 grains of potassium citrate and sodium bicarbonate in orange juice, given hourly or two until ef-

fective.

Kellogg advises 600 to 700 c.c. of fluid to keep up the blood pressure in the eclamptic group. That with a separated placenta, a low blood pressure is dangerous lest it lead to anuria. Decapsulation has no place in these cases. (*Jour. of Obstet. & Gn.*, March 1928.)

Acute suppression of urine should be clearly distinguished from those in which the onset has been gradual, allowing the body to accommodate itself by vicarious elimination by skin, bowels and lungs, lowered metabolism and natural defenses. Myers (*Jour. A. M. A.*, April 17, 1926) reports a case of calculous anuria of 30 days and says he has found several cases in the literature of a duration of from 20 to 29 days.

In Polk's celebrated case of removal of a solitary kidney, the patient lived 11 days after removal.

My own experience is limited to one case and my own impression from cases culled from the literature on the subject is that operation is life-saving when done in proper cases but will fortunately seldom be called for, but has a definite use in otherwise mortal cases.

FRACTURES FROM THE STANDPOINT OF INDUSTRIAL PHYSICIANS*

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In discussing this subject, one recognizes the fact that industrial physicians, as a class, are in the habit of referring their fracture cases to qualified consultants, usually of the orthopedic field. Also one recognizes the fact that there is much more to the proper handling of industrial fractures than an orthopedist, or any other consultant, can give, and this is said with no thought of reflection against anyone's professional capacity. It is because factors arise before the patient is referred and after he is sent back that materially effect the outcome, in some cases possibly as much as the treatment itself, and may considerably influence the patient's subsequent ability to work. It is for the consideration of such factors that this paper is designed.

Incidentally, it is appropriate, interesting and somewhat satisfying to trace the influence of industrial medicine on the treatment of fractures. Prior to the advent of medicine to industry it was customary among

general practitioners to handle their own cases. It was seldom that fractures were referred, and then usually to a surgeon. Orthopedists devoted themselves mostly to deformities.

With the exception of few, of surgical background, the pioneer doctors of industry saw the wisdom and possibly felt the necessity of referring their fractures to the orthopedist, and they did so. Concurrently, the great war gave the orthopedists additional opportunities in the case of fractures, which they recognized and accepted. The

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result was a decided quickening of interest on the part of orthopedics in what was to that specialty a relatively uncultivated field. Now orthopedists are probably, as a group, more concerned with fractures than deformities, and they have developed a technic unlike under the old system.

There is a clever, well-known saying, attributed to Moorhead, that there are four R's in the handling of fractures—recognition, reduction, retention and reeducation. The industrial physician accepts these and adds others, perhaps four—restoration, replacement, rehabilitation, and recompense. These alliterative reminders cover the whole of the subject of fractures in industry and suggest an orderly arrangement for the discussion.

RECOGNITION

It seems hardly worth while to say a fracture must be recognized. Nevertheless, recognition of a fracture is sometimes difficult. Perhaps a better way to express the thought is to say that symptoms are sometimes so vaguely suggestive of fracture that the need of using X-ray and other special means for diagnosis does not occur to the attending physician. He calls the injury a contusion or a sprain, and lets it go at that.

It is the skillful recognition of fracture in those borderline cases that characterizes the work of the experienced industrial physician. He has learned by observation and confirmatory readings with X-rays to interpret the history of an accident, the location of the injury and its appearance, so that he knows when to expect fractures even though there be no displacement, preternatural mobility, or other of the usual symptoms. He knows that failure to recognize such fractures often means unexpected disabilities, unexplained pain, impairments unaccounted for, and personal embarrassment.

It is so easy to make mistakes in cases of this type and the consequences are potentially so disastrous that the point merits emphasis. Recognition is not the simple procedure that one might lightly regard it to be. And furthermore, the responsibility for recognizing these cases is directly up to the industrial physician. He is the first to see them and if he fails to recognize them, the whole responsibility and its associated embarrassment are entirely his. Our own records are spotted with histories of that type. A few illustrations by way of further

emphasis will not be amiss. Details are not essential.

A. J. S.—This patient fell. He had an obvious Colles' fracture, which attracted his whole attention and ours. The examination indicated no other injuries except minor bruises. A few days later he was observed to prefer a high pillow, with neck flexed, not his normal position in rest. He complained of soreness between the shoulder blades. An X-ray of neck and spine was negative. A stereoscopic picture a few days later, carefully studied, suggested a fracture of a superior articulating process of the fourth cervical. Six months later an X-ray showed plainly that he had had a compression fracture of the fourth cervical vertebra.

G. R. T.—The fleshy part of his forearm was crushed, pinched. He had an obvious, rather extensive laceration of the muscles and skin. A week later a paralysis of the ulnar nerve appeared. About a week still later an impairment of supination was found. An X-ray showed a fracture of the ulna without displacement.

J. H.—He fell a short distance and alighted with the instep on a small elevation. Symptoms were all in sole of foot, supposedly a strain of the arch. Supporting straps of adhesive were applied and later an arch support of metal was provided. About two weeks later there was a foot drop, and examination of leg higher up showed a sensitive spot near the head of fibula. X-ray showed fracture of fibula.

R. P.—Was struck on outer side of knee. Regarded injury as sprain. He complained of pain but had no impairment, was thought to be malingerer. Six months later X-ray showed fracture of head of tibia extending into joint.

M. S.—Tripped on wire. Struck knee. No displacement. Limped a little, but had no other symptom. Limping did not clear up, and four weeks later X-ray showed transverse fracture of patella without displacement.

S. T.—A brick fell a short distance and glanced off fore part of skull. There was a laceration of scalp, but no symptoms of intracranial hemorrhage. The wound became infected, and patient died of meningitis. Prior to death an X-ray showed a fracture of skull.

And then there are the many injuries of the fingers, especially those of the finger tips, in which there are fractures without displacement. These may or may not extend into the joints. If such fractures involve the terminal phalanges, they may end in necrosis or felon. If they involve the joints they may result in impaired function. One should be careful to regard all finger injuries as fractures until proven to be otherwise.

These are sufficient to illustrate the point, which is that most any kind of an injury can be accompanied by a fracture. The absence of the cardinal symptoms of preternatural mobility, deformity, etc., is absolutely no guarantee against fracture. On the other hand, every injury should be examined with the expectation of finding a broken bone, and should be so considered until positively proven to be otherwise. It is only through such an assumption that one

can avoid the error of allowing a fracture to go untreated, and the embarrassing complications of such an error.

REDUCTION

To industrial physicians who refer their cases, reduction is no problem. The consultant does that. If there be no displacement, and the physician elects to care for the patient himself, reduction is still no problem. If the physician handles all of his fracture cases, he has the problem of reduction, but its consideration is technical and has no place in this discussion. The subject is mentioned only because it is an important element in the proper handling of fractures. Generally speaking, displaced fractures should be reduced as accurately as possible, for reasons that are obvious, though accuracy is not always possible nor essential to good results. However, it is desirable and may be regarded as an objective worthy of attainment.

RETENTION

Compared with the reduction of a fracture, its retention in proper position, or fixation, during the period of union is much more difficult. Great patience and skill are required. One must strive to obtain not only a satisfactory anatomical repair, but a restoration of normal function as well.

Offhandedly, this might be dismissed with the thought that it is a problem for the consultant, and, true enough, it is. But returning again to the borderline cases with no displacement, the occasions are frequent wherein the industrial physician might justifiably conclude himself to treat the patient. There being no deformity and no abnormal mobility, and, possibly, the patient himself regarding the injury lightly, one might be inclined to think fixation unessential. However, failure to apply a cast or a splint in cases of this type is a dangerous omission, as actual displacement or non-union may follow. Witness fractures of the head of the radius as an example, or of the styloid process of the ulna. Even under the best of attention, these injuries may be followed by impairment and pain. All fractures, we will say, of the extremities, should be treated with fixation, whether displaced or not.

Then comes the question, how long should the cast or splint be left on? We have undoubtedly progressed far past the day when we left casts on six weeks, and spent six months trying to bring back function. The

modern way is to preserve function while getting union, and this is done through passive motion, massage and other kinds of physiotherapy at stated and rather frequent intervals during the treatment. Naturally, the cast is removed for this purpose and reapplied during the intervals. By this method, the patient is discharged at the end of the period of union with a minimum of functional impairment.

RESTORATION

This may be interpreted as the procedure, or procedures, necessary to restore function after union is complete. To some degree all cases require attention of this nature, even though skillfully handled, but, generally speaking, the need for restoration is inversely proportional to the care given the case during the period of fixation. If the fracture is completely reduced, perfectly retained, and sufficient attention is given to massage and passive motion, there will be no need of restoring function, for it will not have been lost. However, that is an ideal difficult to consummate and exists, probably, in theory only. There will be at least the necessity of limbering slightly stiffened muscles and renewing dexterity or agility. This can best be done by putting the patient back at work, preferably his regular work, if he can be persuaded to take it, and his foreman is agreeable to some slowing down of production for a few days. From this point on the patient conducts the treatment himself without conscious effort and so effectively as to require slight, if any, professional supervision.

The foregoing applies to the trifling functional impairments due chiefly to disuse. The problem is much more difficult if there be anatomical impairments, such as adhesions, contractures, and callus formations that interfere directly with function and, perhaps, cause pain, as they are apt to do. Here the problem is difficult in proportion to the extent of the impairment and its location, as, for example, those directly affecting joint motion and the attitude of the patient. This latter element, the attitude of the patient, is undoubtedly as important as any.

These cases may be divided into two classes, those which can be relieved or improved without operation, and those which cannot. The latter class, of course, includes those with malalignment, malunion, abnormal callus formations in relation to joints,

and kindred deviations from the normal, so situated as to interfere more or less permanently with joint function.

Unfortunately, an altogether too large proportion of fracture cases come back to industrial physicians in this unfinished state, most likely because of the nature of the injuries rather than lack of care. However, it is a fact that industrial doctors are in a far better position to see the effects of impairments than any others of their profession, and to them impairments that otherwise might be regarded as inconsequential are of considerable moment.

It is, therefore, a problem of great interest to industrial physicians, this problem of restoration, and they find themselves faced with the necessity frequently of taking up the care of fracture cases where others have left off in the belief the job was done, or to await developments prior to reconstructive measures of an operative nature.

Impairments of the first mentioned class are minor impairments, of course, and are amenable to physiotherapeutic measures means for the application of which industry is, or should be, well supplied with. It is not within the purview of this paper to specify the equipment necessary for this, nor the technic of its use. It is sufficient to say the industrial doctor should know, as usually does, when and how to use physiotherapy. The essential point is that the patient should be gotten back at work, work of some kind, at the earliest possible moment, and given restoration treatments while on his job and such as will supplement the exercises his work provides. The basic treatment is his work. Physiotherapy supplies only what his work does not, yet is essential to full recovery. Impairments of the second class, those that will require reconstruction, should also be handled in this way if the patients are able or can be persuaded to work. This will be discussed more fully under the subject of reconstruction.

There are occasionally one or two great difficulties in the way of applying the foregoing principles of restoration, the patient may not be interested in improvement, and the foreman may be indifferent, or worse. The patient himself is often the greatest obstacle. He may be discouraged, have no desire for improvement, or too lazy to make the effort, but no matter what the reason,

he must be persuaded to undertake the task and inspired to persevere. This requires the exercise of tact, patience and usually all of the other fine qualities of mankind. To help a patient to restore a shoulder, for example, in which the arm is literally clamped to the chest wall, is positively one of the finest achievements of medicine, and there are many of such to the credit of industrial medicine.

Perhaps it is unfair for the doctor to take the credit for an achievement of this kind, because there are other persons involved, the patient and his foreman. Even so, the doctor directs the strategy, he carries the patient through his inevitable periods of depression, and keeps him eternally at it.

The foreman has been mentioned, and he is no insignificant element in the organization for the application of restoration measures. Some foremen do not want cripples, others nag them, and a few give them sympathetic supervision. Fortunate, indeed, is the doctor who has foremen who coöperate with him in this phase of his work.

RECONSTRUCTION

It is not necessary to define this heading. It means just what the word implies. Possibly it has been sufficiently considered under the previous heading, but it is brought up now to emphasize one special point.

It is seldom that the purely industrial physician undertakes to apply corrective or reconstructive measures. These are more particularly in the province of the consultant. Nevertheless, he is usually the one to decide when reconstructive procedures are indicated and it is upon his judgment that they are undertaken.

Though corrective operations may be desirable and feasible, they are completely futile in patients who do not want them, and of doubtful value in patients who have had prolonged disabilities. Our own experience indicates that men over fifty years of age do not make good candidates for restoration. Having tasted of the fruits of leisure and compensation, it takes far more than surgery can offer to get them interested in daily work, and so long as they have the slightest excuse for disability they will be disabled. The habit of disability is very hard to overcome.

Therefore, the first essential to success in reconstruction is to have a patient who really wants to have his condition improved.

There may be exceptions to this conclusion, but they are few. Of course an indifferent patient may change his attitude under skillful handling, and it is in this respect the able industrial physician shows his real value. The point is that candidates for reconstruction must be carefully selected and prepared before the procedure is undertaken, and they must be encouraged to resume work at the earliest possible moment.

REPLACEMENT

The basic problem in fractures always is to so treat the patient that he can resume employment as soon as feasible without jeopardizing the functional result. If the patient comes through his period of fixation with no limitation of function, the problem is then a simple one. He goes back to his usual work, and, except for a few days of slightly reduced production, fits into the routine satisfactorily.

If he has minor impairments, the problem is still simple, providing he has a tolerant foreman. Conversely, if his foreman is intolerant, or perhaps just impatient, the problem becomes complicated in proportion to just how unfavorable the foreman's attitude is. Sometimes the situation can be relieved by a transfer of the patient to another department, but it occasionally happens there is no opportunity for such a transfer; then the doctor's problem is the foreman rather than the patient. The exercise of some ingenuity may solve it, and may not. Only as a last resort should the patient be permitted to revert to disability.

These same principles apply to the handling of major impairments, of both classes, as previously discussed. Always there is the necessity of getting the patient back to productive employment as soon as possible, and so guide both his work and treatment as to relieve worry, promote confidence, and facilitate recovery. In these cases, the doctor is helped materially if the management can employ the patient during the period of restoration without reducing wages, which, to the patient, is usually a matter of paramount importance.

RE-EDUCATION

The generally accepted meaning of this term as applied to the treatment of fractures is that process of training through which the injured employee is enabled again to use a damaged extremity advantageously in his regular work or some other in which

he can profitably engage. It is essentially physiotherapeutic in character, and what has already been said relative to restoration applies equally well here, except that special equipment and personal attention are usually necessary.

REHABILITATION

This is the whole process of reestablishing a badly injured employee in industry, and it may include the various stages of corrective surgery, retraining, etc. These last two headings are introduced because they are frequently and rather loosely used in connection with fractures in industry.

REMUNERATION

Commonly called compensation. The theory and application of the principle of compensation as applied to industrial accidents is splendid, but it certainly does introduce an element in many cases highly disturbing to a conscientious physician. This is perfectly clear to the experienced doctor in industry, but the influence of compensation is so directly reflected in disability periods that the subject is worthy of discussion. How to distinguish between the real and the fictitious disabilities is sometimes the most perplexing problem in the whole subject of fractures. And how to get a man who is over-insured and under-ambitious back on the job, even with a good anatomical and functional result, is sometimes—well, forty white horses can't do it. Contact with this type, and he is often met, tends to make the industrial physician cynical, and this is an attitude he must strive to avoid. It takes a keen mind to separate the wheat from the chaff. We have no suggestion.

SUMMARY

Every injury should be regarded as accompanied by a fracture until proven otherwise. Fractures without displacement should be treated the same as any other fracture after reduction, by fixation. Physiotherapy during and after the period of fixation is essential. The patient should be returned to work, some kind of work, at the earliest possible moment compatible with good results. Sympathetic and intelligent supervision on the part of both the physician and the foreman are necessary to the reestablishment of the injured employee on a profitable basis. Corrective operations should be undertaken only in carefully selected candidates. The influence of compensation on disability periods must not be overlooked.

It is not desired that we close with a cynical thought or attitude. On the contrary, the vast majority of fracture cases are handled intelligently and scientifically, most fracture patients are helpful, grateful, and desirous of resuming profitable employ-

ment, and the average foreman is helpful in working out the program of restoration. Some of the most delightful and satisfying experiences of our professional career have come out of the treating of industrial fracture cases.

A PLAN FOR THE CONTROL OF UNCOMPLICATED DIABETES MELLITUS

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DETROIT, MICHIGAN

The past seven years has seen a very appreciable change in the treatment of diabetes. Dietary regulation still forms the logical basis for treatment, but the discovery of insulin in late 1921 and its commercial production caused the Allen treatment by starvation, which effected such a remarkable change in mortality, to be no longer necessary. The change in a diabetic's condition, which formerly was accomplished by under-feeding is now accomplished in a way much more agreeable to the patient and doctor. The diet prescription of the diabetic can now be planned to fit not only his diabetic state but also his fundamental needs for food. Previously, these needs had to be disregarded so the diet might fit the disease.

Many charts and schemes have been devised as guides for the calculation of diabetic diets. These take into consideration the basal caloric and nitrogen requirements of the individual, using data that have been collected through years of careful metabolic research and data that actual trial has proven to be trustworthy. In many instances, however, the system for calculating the diet has proven more complicated than mastering the original figuring on which the chart is based. Further, the calculation sometimes carries the figured result to an absurd fineness when one considers the possible errors in the actual analysis of foods and the difference in the actual food value of different specimens of the same food, and the unavoidable error to be made by the patient in weighing or estimating his diet.

Because of the desirability of a short hospitalization period no time should be lost in bringing diabetics under control and determining their tolerance for food, and the dose of insulin which will be necessary to control their blood sugar, if insulin is indicated. The plan of treatment which follows is designed to meet these requirements, and prevent an unnecessary period of incapacitation which might follow a period of severe under-nutrition. Further, the mental depression seen so commonly in diabetics

previous to insulin days is now very rare when a sustaining diet can be given and a good prognosis for the future can be truthfully promised.

The initial diet given an adult diabetic patient without complications is not based on the severity of the diabetes but his state of nutrition. A weight consideration naturally divides these patients into three groups:

1. Those normal weight.
2. Those under weight
3. Those over weight

The data necessary to place a patient in one of these groups is:

1. Age
2. Height
3. Actual weight
4. Estimated normal weight

This estimated normal weight is taken as that which is given in the charts used by life insurance actuaries.

A patient at rest, whose weight is approximately normal, should receive a diet calculated to maintain that weight. This amount, we believe, is very close to 25 calories per kilogram body weight per day. Two-thirds of a gram of protein per kilo will usually maintain positive nitrogen balance. This amount is selected for trial. If, however, sufficient nitrogen to cover the daily loss of this substance in the urine is not available in a diet as calculated, enough more must be added to the diet to accom-

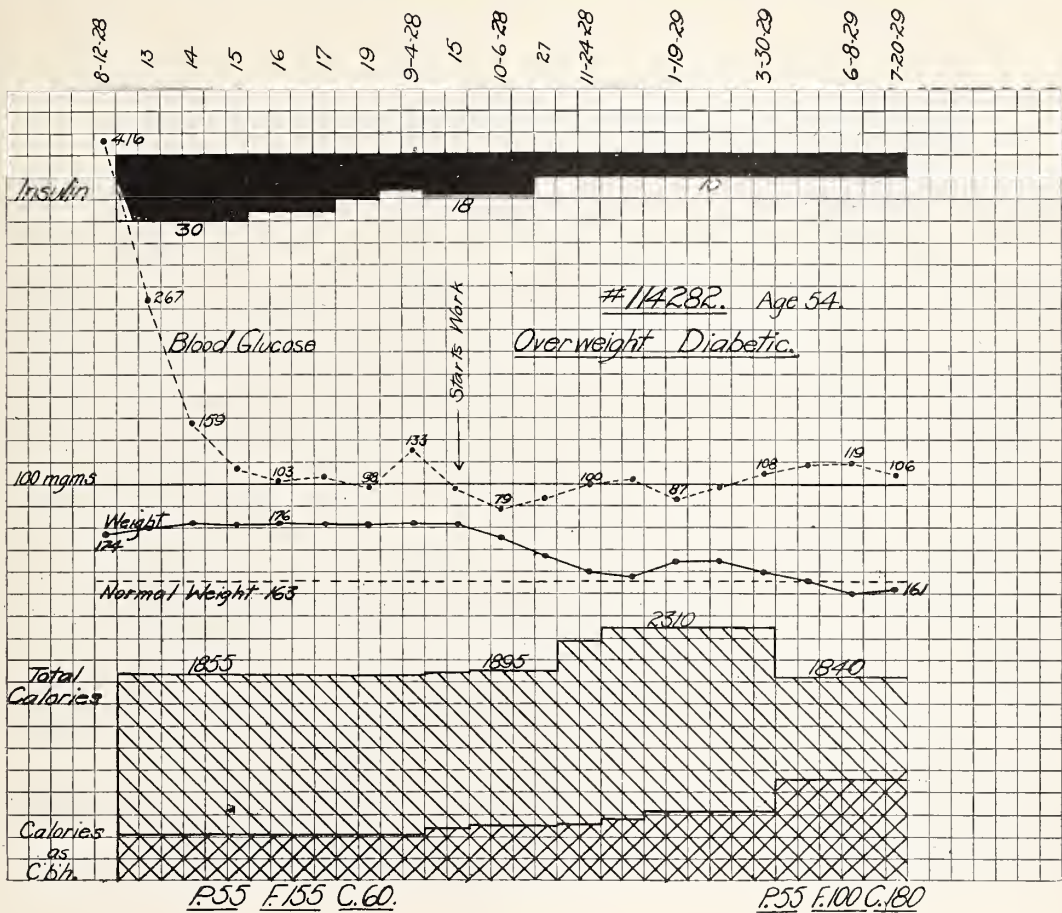


Figure 1

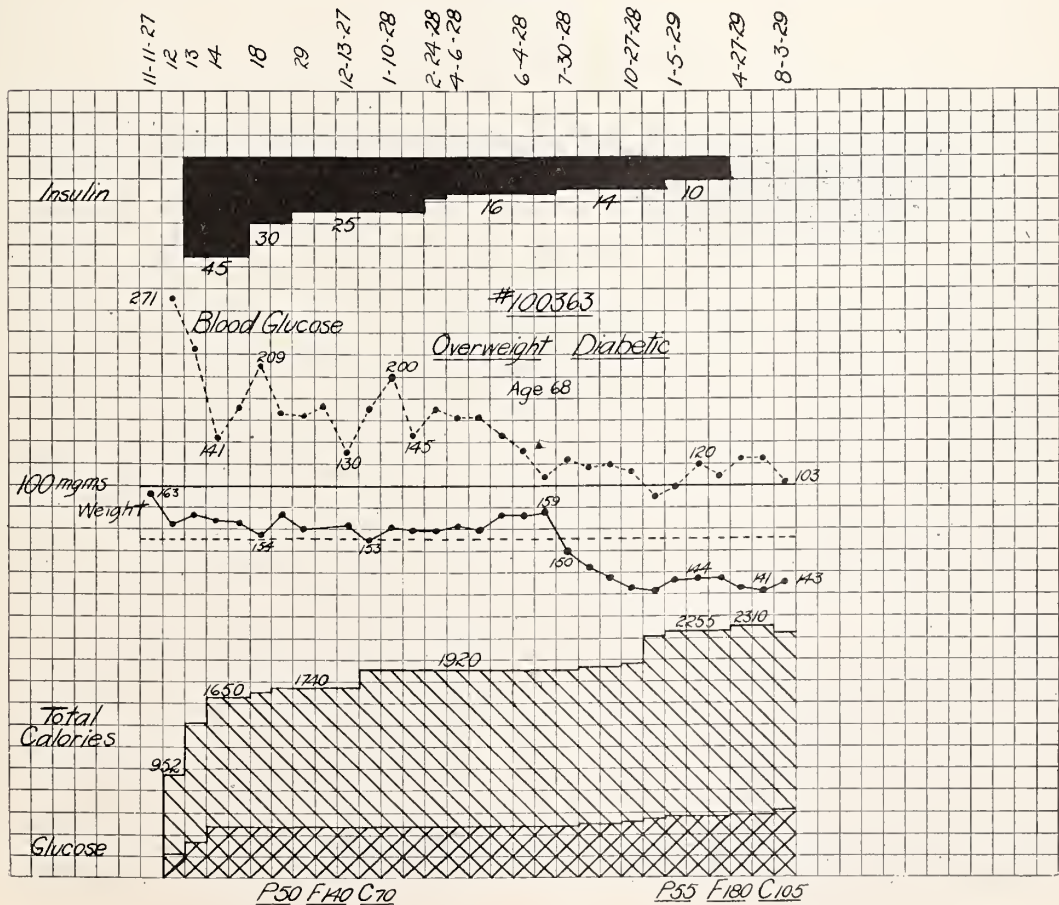


Figure 2

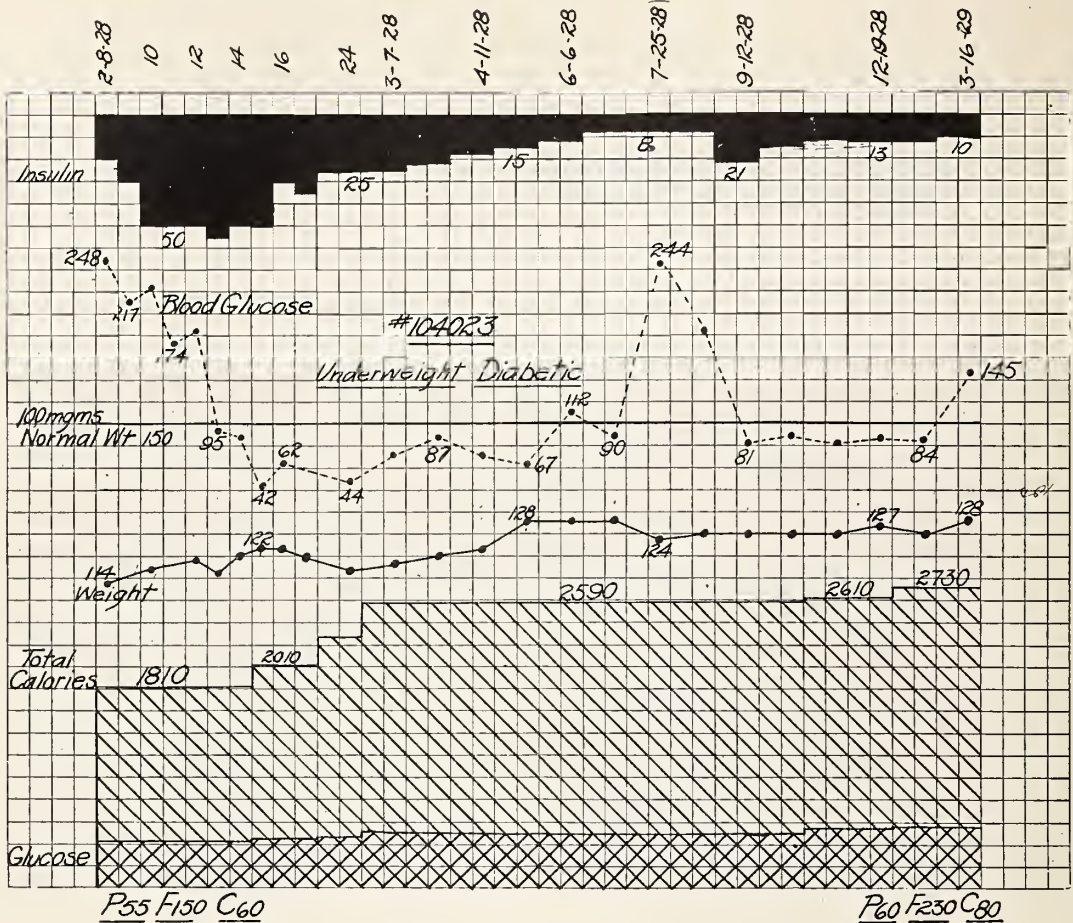


Figure 3

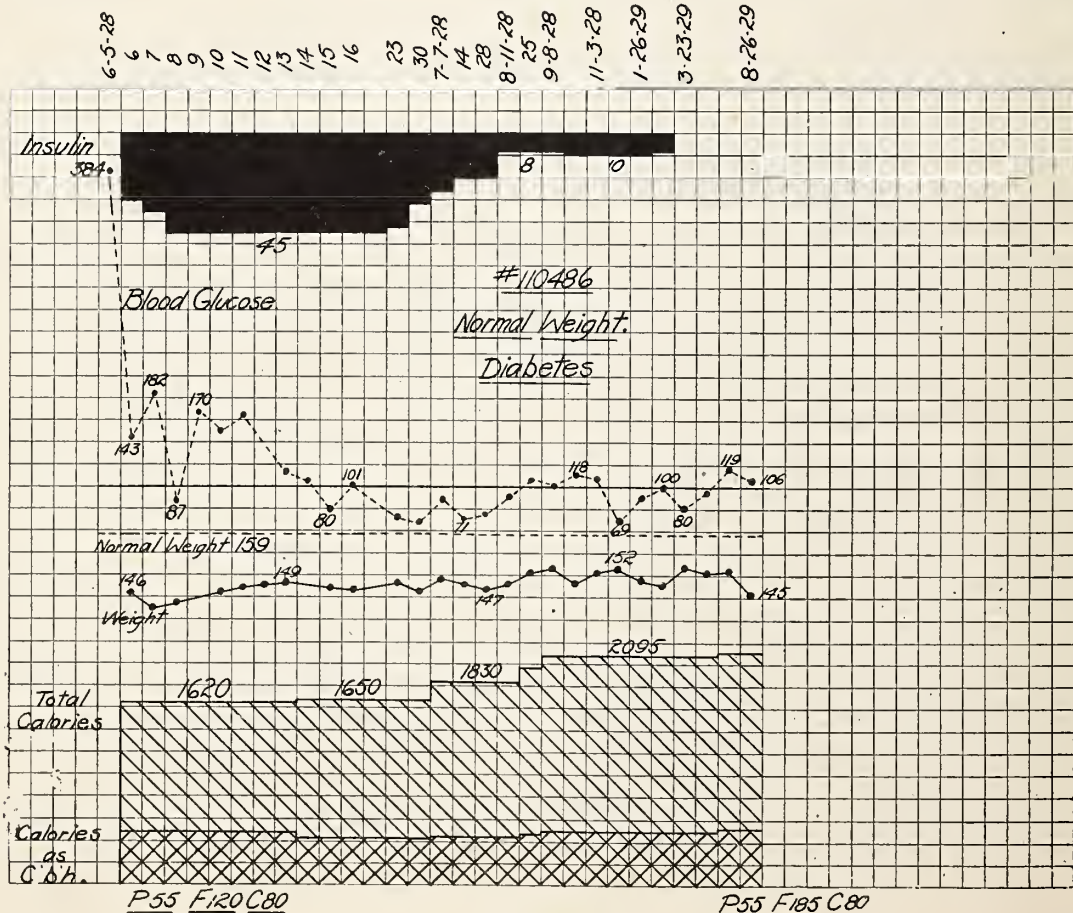


Figure 4

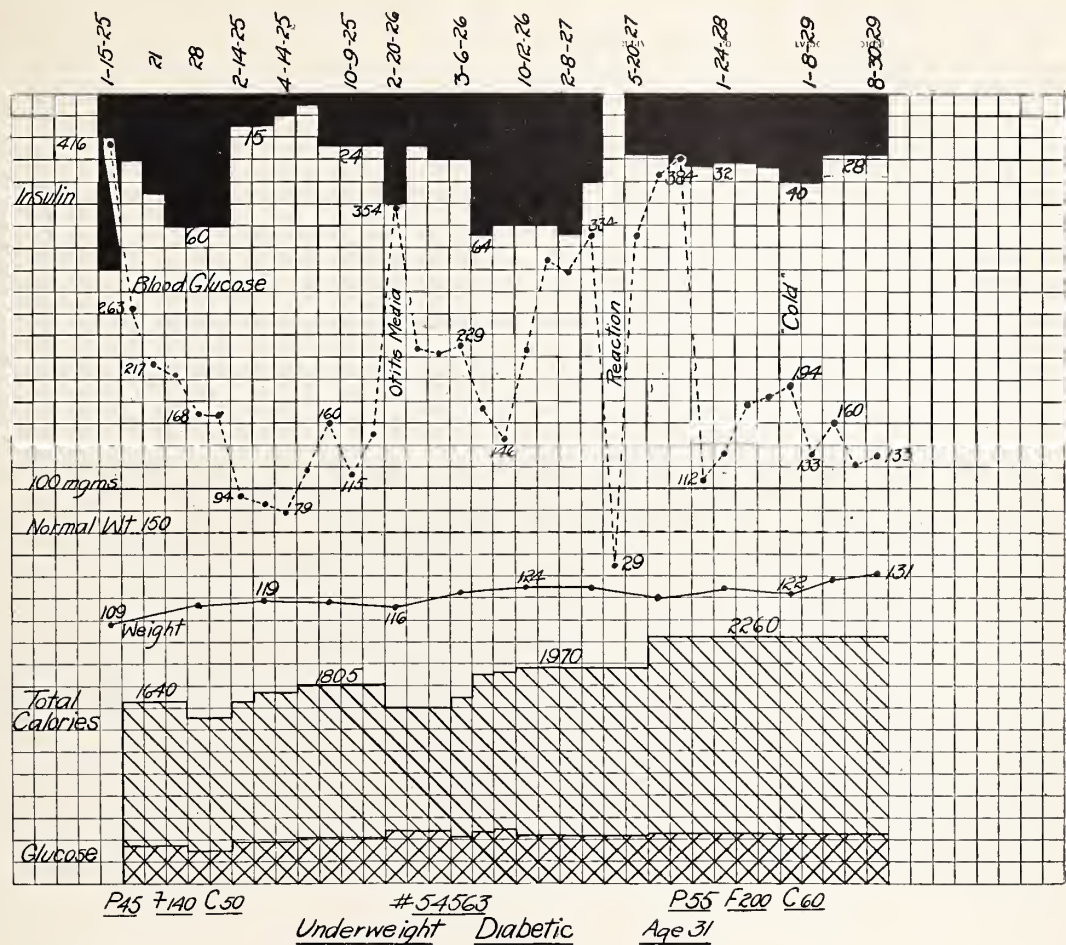


Figure 5

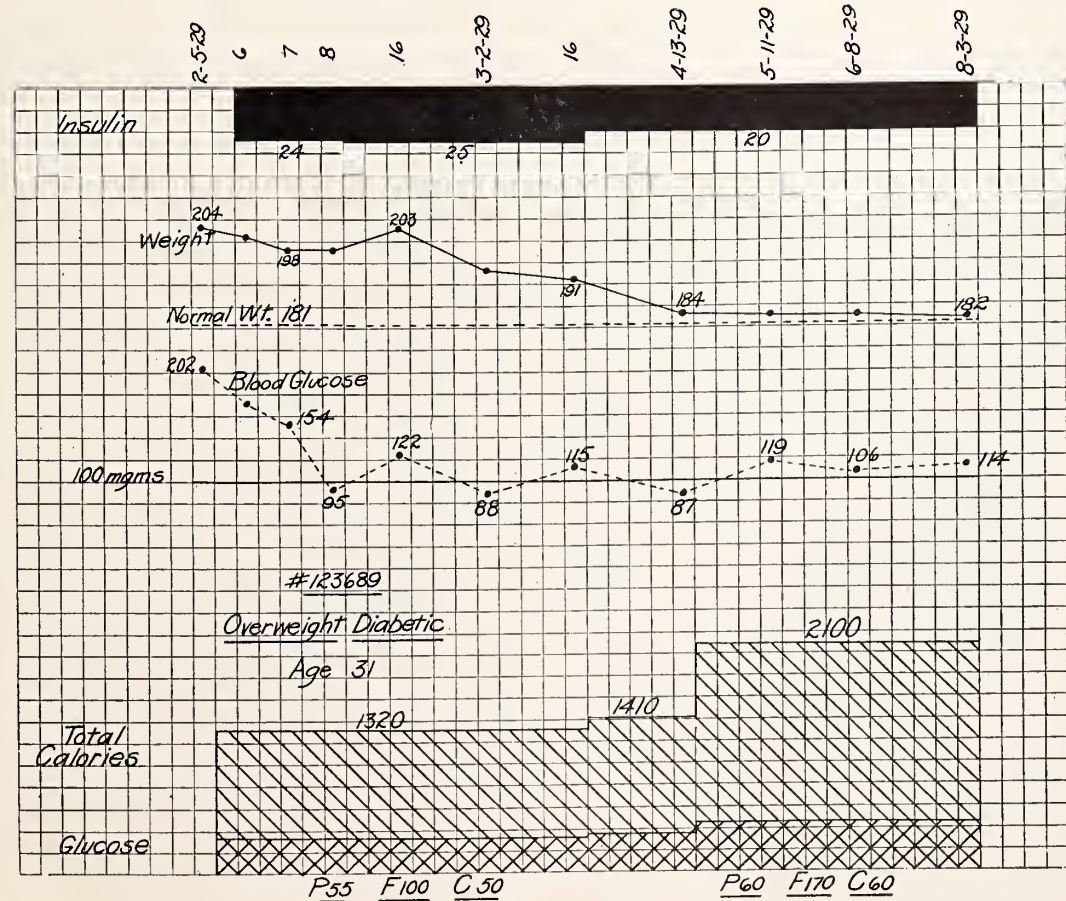


Figure 6

plish this. A diet that permits a negative nitrogen balance should not be permitted if the diet is to be used for a long period of time.

With insulin available, no diabetic need now have a diet containing less than 50 grams of carbohydrate. This amount is ordered regardless of the severity of the diabetes, and is increased as the tolerance increases. The blood sugar is brought to normal by the use of appropriate amounts of insulin, in preference to lowering the carbohydrate allowance below 50 grams.

insulin was discovered. Joslin reports nine such cases and we have seen two. Very low diets for such patients are not only inadvisable, but actually contraindicated.

Since the advent of insulin the undernourished diabetic can be best helped by a diet that more than satisfies his caloric needs. The protein requirement, if these patients are to do well, must be over $\frac{2}{3}$ gram per kilo because it is desirable to have sufficient excess of nitrogen to permit the rebuilding of glandular and muscular tissue that has been broken down because the body has

PLAN FOR DIETARY AND INSULIN TREATMENT OF
UNCOMPLICATED DIABETES MELLITUS

Data Necessary	Age Height Weight Est. Wt.				
	Calories	Protein	Fat	Carbohydrate	Blood Sugar
		Grams	Grams	grams	mgm. per 100 c.c.
Overweight	1200	55	90	50+	100 or less
Normal Weight	25 per kilo	$\frac{2}{3}$ grams per kilo	Sufficient to bring calories to desired level	50+	100 or less
Underweight	3000	1 gram per kilo	Sufficient to bring calories to desired level	70+	125-150

As the protein, carbohydrate, and calories have now been decided upon, the number of grams of fat required can be calculated very easily. Thus the calories derived from the protein and carbohydrate are subtracted from the total calories to determine the number of calories to be derived from the fat. This answer is divided by nine and the resulting figure is the number of *grams* of fat required.

By following this scheme at no time will the resulting diet be excessively ketogenic. The figure of the K/AK ratio will usually fall between one and two, which is very satisfactory according to most authorities and our own experience.

The undernourished diabetics present a somewhat more difficult problem. Their symptoms are usually more severe, both in number and kind. Their malnutrition is many times the result of their disease, indexing its severity. Not only must their diabetes be controlled, but the results of previous metabolic disturbance corrected if this is possible. In its most severe form, in very malnourished diabetics, death has been known to occur from hypoglycemia, before

been unable to burn carbohydrate foods properly. The use of the estimated rather than the real weight for calculating the protein requirement can be used, and $\frac{2}{3}$ gram per kilo allowed, or a trial amount of 1 gram per kilo used until this factor can be checked by laboratory analysis.

There are two reasons why a carbohydrate allowance of more than 50 grams is advisable in this group. The first reason is that these patients more easily develop acidosis, and the second reason is that in order to supply the larger number of calories more fat is required, which in its turn requires more carbohydrate to give a K/AK ratio that is less than two.

Fatigability is a very prominent symptom in this group and disappears only when the nutritional level is improved. A gain in weight can only be accomplished by adequate food allowance. The optimum diet is prescribed regardless of the severity of the diabetes.

Insulin is used to control the blood sugar at a level somewhat above the normal (125-150). This is done as insurance against the unusually severe hypoglycemic reactions

that are otherwise quite common in this type of patient.

One exception to the above scheme should be noted and emphasized. No attempt should be made to cause a marked gain in weight in the aged patient, unless marked malnutrition exists. Even in the malnourished and aged man or woman, no studied attempt should be made to bring the weight to the estimated normal, for the mortality rate of the underweight persons who have passed 50 years is better than those of this age who are normal weight, and infinitely better than the rate of those who are overweight.

The overweight diabetic offers the most favorable group for ease of treatment. When weight reduction is accomplished, the relative severity of the diabetes is diminished, because of the lowering of the basal number of calories required. Even if the functional ability of the pancreas is not at all changed, the severity of the diabetes is diminished, if less calories are required through weight loss.

The diet of the obese diabetic can be

placed at 1,200 calories. Such a diet usually accomplishes a satisfactory weight loss of approximately one pound a week. The maintenance protein, $\frac{2}{3}$ gram per kilo, is prescribed, 50 grams of carbohydrate and the balance of the calories in fat.

In this group, the fundamental principle in the treatment of diabetes can be used without stint, namely, the principle of undernourishment. The weight loss must not be accomplished too rapidly, however; a pound a week after the first two weeks should be considered satisfactory. The diet should be bulky in order that hunger be appeased. If the weight loss is too rapid, a patient will be clinically worse instead of better. Patients differ in the speed which it is safe for them to reduce, and the best single index of whether the loss is too rapid is the blood pressure. If the blood pressure drops too rapidly or drops below 100 systolic, the diet should be increased to a maintenance level for one week, and then a reduction diet of slightly higher caloric value than that first used instituted.

ACADEMIC COLORS

FREDERICK C. WARNSHUIS, M.D.

GRAND RAPIDS, MICHIGAN

At the Detroit session, the House of Delegates adopted "Academic Green" as the official color of the American Medical Association. There are rather interesting historical details associated with academic colors, costumes, customs and ceremonies.

It was in 1887, that the first attempt was made to obtain a uniformity in the significance and use of college gowns, colors and customs in the United States. In 1895, Columbia, Yale, Princeton, New York University and the University of Pennsylvania passed a statute which created a standard. This created a uniform system, adaptable to any institution and intelligible anywhere. Since that date the system has been accepted and is observed by practically every American college.

THREE TYPES OF COSTUME

The distinctions are quite simple, there being three types of gowns and three types of hoods, for bachelors, masters and doctors respectively. The bachelor's gown is the most commonly worn and has long pointed

sleeves; the master's gown has a long closed sleeve, square at the end which comes well below the knee, the arm coming through a slit near the elbow; the doctor's gown is like a pulpit or judge's gown with full round, open sleeves and is faced with velvet and has three bars of velvet on the sleeves. The doctor's cap has a gold tassel while the bachelors and masters wear black. The doctor's and master's gowns are silk, the bachelor's of worsted stuff.

The distinctions in gowns follow closely the British usage, but the American system of hoods is a fine piece of constructive legislation, there being three distinct forms for bachelor, master and doctor, lined with silk of the official colors of the institution granting the degree and trimmed with velvet of the color that represents the department to which the degree pertains.

These colors are:

White, for arts and letters, comes from the white fur of the Oxford and Cambridge B. A. hoods.

Red, for theology, the traditional color of

the church, signifying ardent love and zeal for the faith.

Purple, for law, comes from the royal courts of kings.

Green, for medicine, from the stripe in the army surgeon's uniform and earlier from the color of medicinal herbs.

Blue, for philosophy, the color of truth and wisdom.

Gold Yellow, for science, which signifies the wealth contributed by scientific discoveries.

Pink, for doctors of music, taken from the Oxford gown.

Olive, pharmacy, allied to green, so closely allied to medicine.

It will be perceived, therefore, that each color represents some degree or profession and its selection is based upon some custom or historical fact. It is uniform in the United States. There is no system of relationship in the British universities, each one

having an arbitrary independent code. When worn in America they are rarely understood beyond the fact that red cloth of doctor's shape indicates the possession of some doctorate degree.

In the Intercollegiate Bureau of Academic Costumes of Albany there is a registry of the official colors of some two hundred and fifty American colleges. More detailed authoritative information may be obtained by consulting Monroe's Cyclopedia of Education, Vol. I, and Encyclopedia Americana, Vol. 8, under "Costume." Cottrell & Leonard of Albany, N. Y., are recognized authorities.

How gowns are to be worn, the Hi Iuvenes and the Academic procession, are interestingly described in these references.

No attempt at detail has been made in these notes. The quest has been merely to indicate the basis for our Academic colors and costumes.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Commissioner

LANSING, MICHIGAN

SOME COMMENTS ON THE 1929 DEATH RECORDS

During the year 1929 there were reported to the State Department of Health, Bureau of Records and Statistics, 56,117 deaths, which is equivalent to a death rate of 11.9 per 1,000 of population. This as compared to 54,755 deaths reported in 1928, but on account of the increasing population the rate is identical, namely, 11.9.

In the consideration of the causes of death the most striking increase is in the number of deaths due to epidemic cerebrospinal fever or meningococcus meningitis. It will be recalled that this disease was epidemic in several parts of the state during 1929 and resulted in 852 deaths. This as compared to 146 deaths in 1928, 45 in 1927, 42 in 1926 and 19 in 1925. In this disease it seems that we always have a few sporadic cases and deaths and no doubt in many cases the diagnosis is questionable, but when the disease becomes epidemic its ravages are very high.

As the principal cause of death, organic heart disease still holds first place, as it has for many years, there being 8,651 deaths from this cause in 1929 as compared to 8,342 in 1928. This represents more than

15 per cent of the total deaths from all causes.

Changing the relative rank, cancer now occupies second place, which was occupied by cerebral hemorrhage in 1928, but in 1929 cancer had one more death than cerebral hemorrhage. There were 4,446 deaths from cancer (all forms), an increase of 197 over the record in 1928 when there were 4,249. Of the subdivisions of cancer we find that 1,600 of these deaths were due to cancer of the stomach and liver, 646 were cancer of the female genital organs, 626 cancer of the peritoneum and intestines, 378 were cancer of the breast, 121 were cancer of the buccal cavity, 117 were cancer of the skin, and 958 were cancer of other organs. There can be no question but that the number of deaths from cancer is increasing. A percentage of the increase is undoubtedly due to better diagnosis, but this should not be accepted as an excuse. Cancer is increasing and this increase should be a challenge to those research workers who are working on the etiology of this human scourge.

Cerebral hemorrhage, which occupied second place in 1928, dropped to third in 1929, being, however, just one death behind cancer, and with three less deaths than were recorded in 1928.

The fourth place both years is given to accidents. During 1929 there were recorded 4,133 accidental deaths, this as compared to 3,862 in 1928. The principal causes of accidental deaths were, first, automobile accidents, of which there were 1,418. Falls were the cause of 630 deaths. This includes many falls of old people on the ice as well as falls in the home. Next in importance was drowning, for which were recorded 432 deaths. Burns caused a loss of 321 deaths, of which 109 were due to conflagration and 212 to other forms of accidental burns.

Railroad accidents resulted in 182 deaths, which figure, however, does not include deaths due to collision between automobiles and railroad trains. This would add 101 deaths and in addition thereto there were 22 deaths due to collision between automobile and street car or trolley. This makes a total, when including the 1,418 automobile deaths above, of 1,541 deaths in which the automobile was a factor. It is a rule of statistical practice to charge a death where an automobile and a heavier vehicle are involved, such as a railroad train or street car, to the heavier vehicle, but in this state a separate classification is made of these two items as indicated above.

It is a sad commentary on our civilization when almost $7\frac{1}{2}$ per cent of all of the deaths that occur are due to accidents. It seems quite evident that our toll of lives from this cause is much higher than it is in Europe. In the attempt of the American delegation to the International Statistical Institute to provide for a more careful subdivision of accidental deaths in the International List, it was almost impossible to secure the interest of any of the European delegates. They simply refused to regard accidents of sufficient importance to justify any particularly careful subdivision.

Tuberculosis, which was in the sixth place in the 1928 list of deaths, has advanced to fifth place, with only, however, a slight increase in the number of deaths, which advanced from 3,108 in 1928 to 3,140 in 1929. The rate, however, showed a slight decrease. The number of deaths per 100,000 of population for 1929 was 66.8 as compared to 67.7 in 1928.

As to the location of the lesions in tuberculosis, we find that of the above 3,140 deaths, 2,685 were tuberculosis of the lungs; 219 were tuberculosis of the meninges and central nervous system; 75 were tuberculo-

sis of the intestines and peritoneum; 31 were tuberculosis of the vertebral column (Pott's Disease); 8 were tuberculosis of the joints (White Swelling); 38 were tuberculosis of other organs, and 84 were disseminated tuberculosis.

Chronic nephritis recorded 2,939 deaths, a decrease of 230 deaths from 1928 when nephritis occupied the fifth place in the list. This disease ranks as one of the degenerative diseases and in all of these causes we may expect properly an increase in the number of deaths as time goes on.

The seventh in the list is pneumonia, which includes the lobar pneumonias and those death certificates in which the return reads "pneumonia," unqualified. It does not, however, include bronchopneumonia when so stated. There were 2,578 deaths from this cause as compared to 2,717 in 1928. Considering the fact that we had a rather sharp epidemic of influenza in December of 1927 which extended over into January of 1928 this decrease in the number of deaths was to be expected. This disease was in seventh place in 1928 also.

The eighth cause in both years was premature birth, which registered 1,853 deaths in 1929 as compared to 1,846 in 1928. There can be no doubt but what this cause of death can be reduced by good prenatal work and the fact that this is such an important cause of death should be regarded as an incentive to more intensive prenatal work.

The ninth cause of death was influenza, of which there were 1,779 deaths, of which 1,004 were reported as having pulmonary complications and 775 in which there was no statement of any complications. It will be understood that deaths from pneumonia following influenza, where this statement is made, are chargeable to influenza and not to pneumonia. In view of the fact that there was no definite epidemic of this disease during 1929 there is, of course, the possibility that this number of deaths represents loose diagnosis to some extent. This cause of death in 1928 was in tenth place and caused 1,651 deaths.

The tenth cause of death was bronchopneumonia with 1,638 deaths. This is always unsatisfactory as a cause of death because it is usually a secondary infection and should be charged to the primary cause. It is very difficult, however, to get a statement that will be clear enough to justify the

change in classification. This cause of death was ninth in importance in 1928 when there were 1,801 deaths recorded to this title.

These ten principal causes of death represent a total of 35,602 deaths or 63 per cent of all of the deaths reported. Following in importance in the order of magnitude appears:

	1929	1928
No. 11—Diseases of the Arteries.....	1,132	1,201
No. 12—Diabetes Mellitus.....	935	905
No. 13—Meningitis	852	146
No. 14—Appendicitis	828	746
No. 15—Diarrhea and Enteritis (under 2 years).....	765	802

It will be noted that the only sharp change in this group of five causes was in the case of meningitis which has been discussed above.

Adding this group to the preceding ten causes we have a total of 40,114 deaths or equivalent to 71 per cent of all of the total number of deaths.

In the next five causes we find:

	1929	1928
No. 16—Congenital Malformations..	756	733
No. 17—Endo- and Myocarditis.....	753	642
No. 18—Angina Pectoris	712	689
No. 19—Suicides (all forms).....	674	653
No. 20—Puerperal Causes	617	603

As was true in the preceding group of all five causes there is no material change in any of these causes.

Under the group of puerperal deaths we find 256 to be due to puerperal septicemia, a very definitely preventable cause. We find 130 due to puerperal albuminuria and convulsions, a condition which is at least reducible if not entirely preventable. Under the rules of classification, all puerperal septicemia is charged to that particular title regardless of whether it follows abortion or labor. Under the new International List which has just been adopted and which is in use in this department in 1930, a distinction is made in this particular classification. Under the new classification abortions with septicemia are separately classified so that it will be possible that the distinction between those cases in which the septicemia followed abortion and which particular group of septicemias are much more difficult to prevent than those which follow labor as this condition frequently follows the illegal operation and is, of course, quite difficult to control.

These twenty causes represent 43,626 deaths or 78 per cent of all deaths.

In the next group of diseases the most unsatisfactory showing is in the case of diphtheria which showed an increase of 114

deaths, equivalent to about 30 per cent over the record for 1928. Syphilis, which caused almost 400 deaths, is another disease that will profit under the new type of classification when distinction will be made between congenital and acquired syphilis. These 25 causes of death cover a total of 45,988 deaths, equivalent to 82 per cent of all deaths that occurred. This leaves only about 10,000 to be distributed among the other 175 causes of death.

	1929	1928
No. 21—Senility	561	584
No. 22—Hernia and Intestinal Ob- struction	500	506
No. 23—Diphtheria	498	384
No. 24—Ulcer of the Stomach and Duodenum	406	356
No. 25—Syphilis	397	384

In the seasonal distribution of deaths, by far the greatest number occurred in January and the smallest in August. The following table shows the number of deaths reported each month, together with the daily average, which, of course, adjusts the difference in the length of the month.

	Number of Deaths	Daily Average
January	6,844	220.8
February	4,526	161.6
March	5,092	164.3
April	4,845	161.5
May	5,237	168.9
June	4,344	144.8
July	4,259	137.4
August	4,058	130.9
September	4,147	138.2
October	4,287	138.3
November	3,977	132.6
December	4,501	145.2

It will be observed that about 55 per cent of all of the deaths are within the first six months.

In addition to those diseases which have been commented upon above, we note of peculiar interest the deaths from the communicable diseases as follows:

Typhoid Fever	81
Smallpox	6
Undulant Fever	3
Measles	146
Scarlet Fever	145
Whooping Cough	255
Diphtheria	498

One disease which seems to be of increasing importance is lethargic encephalitis, to which item are charged 55 deaths.

Another very important cause of death was 395 deaths that were due to homicide; this as compared to 330 homicides in 1928. It would seem from this that the reduction of the death rate is not entirely a public health and medical problem but also, in a measure, a police problem.

—W. J. V. D.

Official Program—110th Annual Meeting, Michigan State Medical Society—Benton Harbor, Mich., Sept. 15, 16, 17, 1930

OFFICIAL CALL

The Michigan State Medical Society will convene in annual session, in Benton Harbor, on September 15, 16 and 17, 1930. The provisions of our Constitution and By-Laws and the official program will govern the business and transactions of this annual session.

J. D. BROOK, *President*
R. C. STONE, *Council Chairman*
H. J. PYLE, *Speaker*.

Attest:

F. C. WARNSHUIS, *Secretary*.

DAILY SCHEDULE

Sept. 14—HOTEL WHITCOMB, ST. JOSEPH.

6:00 P. M.—Meeting of the Council.

Sept. 15—HOTEL WHITCOMB, ST. JOSEPH.

10:00 A. M.—House of Delegates.

2:00 P. M.—House of Delegates.

7:30 P. M.—House of Delegates.

Sept. 16—SONNER HALL, BENTON HARBOR.

9:15 A. M.—Scientific Sections.

1:30 P. M.—Scientific Sections.

7:30 P. M.—First General Session.

Sept. 17—

9:15 A. M.—Scientific Sections.

12:00 M.—Second General Session.

1:30 P. M.—Scientific Sections.

Registration: Sonner Hall.

Scientific Exhibits: Sonner Hall.

Commercial Exhibits: Sonner Hall.

House of Delegates: Meets in Ball Room of Hotel Whitcomb, St. Joseph, on Monday, September 15, at 10:00 A. M.

Surgical Section: Meets in Peace Temple, Across Street from Sonner Hall.

FIRST GENERAL SESSION

Place: Main Auditorium, Sonner Hall.

Time: September 16, 7:30 P. M.

President: J. D. Brook, Grandville.

Secretary: F. C. Warnshuis, Grand Rapids.

1. Call to Order.

2. Invocation—Howard D. Blanning, D.D.

3. Welcome—President J. J. McDermot, Berrien County Medical Society.

4. Announcements—The Secretary.

5. In Appreciation—The Council.

6. President's Annual Address—J. D. Brook, Grandville.

7. Address: "Fundamental Americanism"—Gus. W. Dwyer, Professor of Economics, Vanderbilt University, Nashville, Tenn.

8. Nominations for President.

9. Resolutions.

SECOND GENERAL SESSION

Time: September 17.

Place: Sonner Hall.

1. Call to Order.

2. Report of Nominating Committee.

3. Introduction of President.

4. Resolutions.

5. Adjournment.

SCIENTIFIC SECTIONS

Section on General Medicine

Chairman: WM. NORTHRUP, Grand Rapids.

Secretary: MILTON R. SHAW, Lansing.

MORNING SESSION

September 16—9:15 A. M.

1. Chairman's Address — Dr. William Northrup, Grand Rapids.
2. "A Survey of the Pollen Situation in Detroit and Its Application in the Treatment of Hay Fever and Asthma"—Dr. George L. Walbott, Detroit.
3. "Therapeutic Application of Ultraviolet Radiation"—Dr. Willis Peck, Ann Arbor.
4. "Bacteriophage in Infectious Disease"—Dr. N. W. Larkum, Lansing.
5. "Diagnosis and Significance of Cyanosis, Hyperpnea and Allied Conditions"—Dr. Plinn F. Morse, Detroit.
6. "Intestinal Disorders: Necessity for Specific Diagnosis and Rational Therapy"—Dr. Elmer L. Eggleston, Battle Creek.

AFTERNOON SESSION

September 16—1:30 P. M.

7. "A Clinical Study of Myxedema in Michigan"—Dr. H. H. Riecker, Ann Arbor.
8. "Diagnosis of Mild Hyperthyroidism"—Dr. William Vis, Grand Rapids.
9. "The Neurological Side of Hyperthyroidism"—Dr. C. D. Camp, Ann Arbor.
10. "Hypometabolism, a Factor in High Blood Pressure"—Dr. Wilbur E. Post, Chicago.
11. "Arterial Hypotension"—Dr. M. A. Mortensen, Battle Creek.

MORNING SESSION

September 17—9:15 A. M.

SYMPOSIUM ON PEPTIC ULCER

Joint Meeting of Sections in Medicine
and Surgery

1. "Medical Management of Peptic Ulcer"—Dr. Ralph C. Brown, Chicago.
 2. "The Roentgenological Diagnosis of Peptic Ulcer"—Dr. A. W. Crane, Kalamazoo.
- (See Surgery Section program for other papers this morning.)

AFTERNOON SESSION

September 17—1:30 P. M.

Election of Chairman and Secretary.

1. "Osteogenic Sarcoma: Report of a Case"—Dr. L. E. Holly, Grand Rapids.
2. "Electrocardiographic Observations on an Exposed Heart, with a Review of Bundle Branch Block Cases"—Dr. Paul S. Barker, Ann Arbor.
3. "Tachycardia"—Dr. Louis M. Warfield, Milwaukee.
4. "Cardiac Pain and Its Differential Diagnosis"—Dr. Hugo A. Freund, Detroit.
5. "Anemia of Nephritis"—Dr. L. E. Verity, Battle Creek.

Section on Surgery

Chairman: WALTER L. FINTON, Jackson.
Secretary: GROVER C. PENBERTHY, Detroit.

MORNING SESSION

September 16—9:15 A. M.

1. Chairman's Address: "The Group Practice of Medicine"—Dr. Walter L. Finton, Jackson.
2. "Observations on Chronic Appendicitis"—Dr. Frederick A. Coller, Ann Arbor.
 A study of a series of 350 cases with particular reference to a comparison of two groups—one in which operation was done early and the second in which operation was performed late in the course of the disease. An analysis of the principle diagnostic points and errors. A plea for operation on diagnosis.
 Discussion—Dr. R. C. Stone, Battle Creek; Dr. G. A. Seybold, Jackson.
3. "Gall-bladder Disease, Diagnosis and Indications for Operation"—Dr. Roy D. McClure, Detroit.

Degree of pathological change necessary to cause symptoms which may have little to suggest primary infection of biliary tract. Classi-

cal symptoms indicate only rather advanced state of disease. Methods now used for early diagnoses. Examination of bile obtained through duodenal tube. Cholecystography. Medical measures and their limitations. Indications for operation.

Discussion—Dr. C. D. Brooks, Detroit; Dr. Charles E. Boys, Kalamazoo.

4. "Treatment of Fractures"—Dr. Paul A. Magnuson, Chicago.
 Discussion—Dr. F. C. Kidner, Detroit; Dr. F. C. Warnshuis, Grand Rapids.

AFTERNOON SESSION

September 16—1:30 P. M.

5. "Thyroidism with Unusual Clinical Manifestations"—Dr. Max Ballin, Detroit.

Dysfunction of the thyroid, reflected roughly, in over-activity or insufficiency has been well studied and is well understood. Dysfunction of several of the other glands of internal secretion are not so well known, but lead to a well defined clinical state, both by over and under activity. Clinical syndrome due to over and under activity of the adrenal, pancreatic island and parathyroid are discarded. In addition some general remarks in relation to the thyroid and hypophysis.

Discussion—Dr. Henry J. Vanden Berg, Grand Rapids; Dr. Plinn F. Morse, Detroit.

6. "The Treatment of Acquired Contractions of the Hand"—Dr. Sumner L. Koch, Chicago.

Discussion—Dr. Edward C. Davidson, Detroit; Dr. A. C. Hall, Detroit.

7. "Modern Trend in Anesthesia"—Dr. Frank J. Murphy, Detroit.

Anesthesia primarily to control pain. No one method or agent universally suitable. Tendency toward combined anesthesia. Need for modern apparatus stressed. Anesthesia as a specialty. Dental anesthesia criticized. Importance of control in anesthesia. Some faults and virtues of agents and methods in current use. Carbon dioxide mentioned as adjunct to anesthesia.

Discussion—Dr. Myra E. Babcock, Detroit; Dr. Wm. T. Shannon, Detroit.

8. "Medical Diathermy in Urology"—Dr. Robert McArthur, Detroit.

A. The physiological effects of diathermy.
 B. The technic of treatment illustrated by lantern slides with the results obtained in:
 (1) 39 cases of acute anterior urethritis; (2) 7 cases of periurethritis; (3) 20 cases of posterior urethritis; (4) 36 cases of acute epididymitis; (5) 34 cases of acute prostatitis; (6) 73 cases of chronic prostatitis and seminal vesiculitis; (7) 14 cases of gonorrhoeal arthritis; (8) 8 cases of prostatism. C. Does diathermy applied to an epididymitis cause sterility? D. Discussion.

Discussion—Dr. Alvin Thompson, Flint; Dr. Robert E. Cumming, Detroit.

MORNING SESSION

September 17—9:15 A. M.

JOINT MEETING OF MEDICAL AND SURGICAL SECTIONS

Symposium on Duodenal and Gastric Ulcer

1. "The Cause and Control of Gastric Acidity"—Dr. George W. Crile, Cleveland.

Evidence will be presented which indicates that peptic ulcer is caused by hyperacidity and that acidity is controlled by the thyroid gland. The activity of the thyroid gland is controlled by the nervous system and the adrenals. Gastric ulcer, therefore, may be attacked (1) by controlling the nervous system, that is, mental and emotional processes, (2) by medical control of the hyperacidity, that is, by alkaline treatment, (3) by removal of the secreting glands, that is, by partial gastrectomy, (4) in cases of recurrent ulcer by partial thyroidectomy, and (5) denervation of the adrenal glands.

2. "Medical Management"—Dr. Ralph C. Brown, Chicago.
3. "Roentgenological Diagnosis"—Dr. A. W. Crane, Kalamazoo.
4. "Surgical Management"—Dr. E. Starr Judd, Rochester.

Peptic ulcer is a very much more common disease than is generally realized. In the beginning a comparatively simple lesion is present. Often this heals after a period of a few weeks and no further symptoms occur. In many instances healing can be induced by proper management and diet. Since we know that some of the ulcers do heal spontaneously and that others may be made to heal, young people should have the benefit of a carefully regulated dietary regimen before any surgical treatment is considered, especially if the symptoms are not severe and the history is of short duration. In the event this fails or cannot be carried out satisfactorily, surgical treatment is indicated. If the symptoms have persisted for a long time and if there is evidence of hemorrhage, perforation or obstruction, surgical treatment should be carried out without delay. In any case in which an operation is required, the surgical treatment should be conservative as it has been shown that satisfactory results are obtained by this method. If the ulcer is on the lesser curvature of the stomach it should be excised if this can be done without causing too much deformity, but this procedure should be accompanied by a gastroenterostomy since the excision of a portion of the lesser curvature may possibly interfere with the gastric motility. In the event the ulcer is large and near the pylorus, a partial resection of the stomach should be made. Frequently mid-gastric resection is suitable if the ulcer is situated above the middle of the stomach. The operation of choice for duodenal ulcer is the excision of the cap of the duodenum with the lesion together with the anterior two-thirds of the pyloric sphincter muscle, making closure by uniting the stomach to the duodenum, which results in a gastroduodenostomy. If this procedure cannot be carried out because of de-

formity and fixation of the duodenum, then the best plan is to perform a posterior short loop gastroenterostomy. The great wave of enthusiasm for resection of the stomach for duodenal ulcer or small ulcer on the lesser curvature of the stomach is rapidly passing by. While the results of conservative surgical treatment are not perfect, nevertheless they are more satisfactory than those obtained by removal of a large part of the stomach.

5. "Postoperative Jejunal Ulcers and Complications following Surgical Treatment"—Dr. Norman M. Allen, Detroit.

Postoperative jejunal ulcers occurring after the surgical treatment of gastric or duodenal ulcers where either gastric resection or gastroenterostomy has been performed varies, according to some authors, from 2 per cent to 10 per cent, the time of this recurrence also varying from a few weeks to eleven years. It is also stated that hereditary physical make-up and gastric mechanism has a definite etiological factor on the original ulcer and on the recurrence, this condition occurring frequently in the same families. However, there are many theories advanced, some of which are that the anastomosis had been badly placed, resulting in improper functioning of the stoma, use of clamps and so forth. From our observation, the treatment of choice in marginal ulcer when the primary operation was gastroenterostomy, is disconnection of the gastroenterostomy, resection of the ulcer, repair of the jejunum and stomach, providing there is no stenosis in the pylorus, thus allowing the stomach to empty in its normal way. Where partial gastrectomy has been performed, excision of the ulcer with small enterostomy tube introduced into the jejunum to place the former ulcer bearing area at absolute rest for several days.

AFTERNOON SESSION

September 17—1:30 P. M.

Election of Officers.

1. "End-Results in Cancer"—Dr. Richard R. Smith, Grand Rapids.
Discussion—Dr. C. W. Halliday, Detroit; Dr. Harry C. Saltzstein, Detroit.
2. "Ileus with Report of Two-Stage Operation"—Dr. Harry B. Knapp, Battle Creek.

Intestinal obstruction mortality at present is about 40 per cent. High mortality due to delay in operating. Acuteness of onset depends on degree of strangulation, and the site of obstruction. Ninety-one per cent of obstructions of colon are due to carcinoma. Eighty-eight per cent of small intestinal obstructions are due to adhesions or intestinal strangulation. Early obstruction easily managed by immediate surgery. Late operation requires greatest surgical skill and judgment to handle developing complications.

Discussion—Dr. J. G. Manwaring, Flint; Dr. Wm. R. Clinton, Detroit.

3. "The Management of Filiform Strictures and Their Complications"—Dr. Reed M. Nesbit, Ann Arbor.

Discussion—Dr. Harry W. Plagemeyer, Detroit; Dr. Wm. J. Butler, Grand Rapids.

Section on Gynecology and Obstetrics

Chairman: HAROLD HENDERSON, Detroit.

Secretary: HARRY M. NELSON, Detroit.

MORNING SESSION

September 16—9:15 A. M.

1. "Sterility: Its Management in an Organized Clinic"—Alexander Campbell and J. Duane Miller, Grand Rapids.
2. Title to be announced—Dr. Wilkins, Ann Arbor.
3. Title to be announced—Clarence E. Toshack, Saginaw.
4. "The Use of X-ray in Obstetrical and Gynecological Diagnosis"—Irving F. Stein, Chicago.

AFTERNOON SESSION

September 16—1:15 P. M.

1. "Ascheim-Zondak Test for Pregnancy"—Harold Mack, Detroit.
2. "Relation of Pelvic Inclination and Lumbar Index in Obstetrics"—Cleary Swanson, Detroit.
3. "Atrophic Vulvitis and Cancer of the Vulva"—M. Smeltzer and H. M. Nelson, Detroit.
4. "Diagnosis of Contracted Pelvis"—David S. Hillis, Chicago.

MORNING SESSION

September 17—9:15 A. M.

1. "Use of Avertin in Obstetrics and Gynecology"—J. M. Pierce, Ann Arbor.
2. "Dermoid Cysts of the Ovary"—Harold Furlong, Pontiac.
3. Title to be announced—Carey Culbertson, Chicago.
4. "Trichomonas Vaginalis Infection of the Vagina"—George Kamperman, Detroit.

AFTERNOON SESSION

September 17—1:15 P. M.

Election of Officers.

1. "Eclampsia, A Preventable Disease"—E. B. Anderson, Grand Rapids.
2. Title to be announced—Paul W. Willets, Grand Rapids.
3. Title to be announced—F. H. Falls, Chicago.

Section on Pediatrics

Chairman: T. D. GORDON, Grand Rapids.

Secretary: JOHN PARSONS, Ann Arbor.

MORNING SESSION

September 16—9:15 A. M.

1. "Behavior Disorders in Childhood and the Relation to the Pediatrician"—Dr. Louis A. Schwartz, Director Clinic for Juvenile Research, Detroit.

Brief discussion of the history and newer aspects of mental hygiene. In our Detroit Clinic for Juvenile Research, Yale University, we are endeavoring to correlate and evaluate the sociological, familial, physical, laboratory, psychological and neuro-psychiatric findings in a series of young, delinquent children, who are being studied over a five-year period, in order to determine some of the underlying mechanisms of conduct.

2. "Behavior Problems in School Children"—Willard C. Olson, Associate Professor of Education, and Director of Research in Child Development, University of Michigan, Ann Arbor.

The paper will be concerned with the discussion of some of the common conduct disorders and nervous habits in children and their relation to such factors as age, sex, intelligence, school achievement, family history, habit formation, nutritional status, fatigue and imitation. The topic will be introduced by a brief account of the program in child development being initiated by the University of Michigan.

3. "Child Guidance"—Dr. Leo Henry Bartemeier, Detroit.

Practical experiences of a psychiatrist working with a group of Pediatricians on a consultation basis over a period of six months; nature of problems encountered; methods employed and therapeutic results obtained from said procedure.

4. Title to be announced—Orus Ray Yoder, M.D., Assistant Superintendent Kalamazoo State Hospital, Kalamazoo.

The etiology and pathology of most mental diseases is as yet vague, indefinite, and largely theoretical. The cure is equally obscure and uncertain. In our mental hygiene work we must continually guard against arrogance, against new cures, and promises not based on scientific facts, which may later be exploited and discarded. What the mental hygiene movement needs is not propaganda or publicity, but scientific men whose intellectual integrity will outweigh the desire for fame or fortune.

AFTERNOON SESSION

September 16—1:30 P. M.

1. "Tuberculosis in Children"—Dr. Henry D. Chadwick, Detroit.

The type of disease as shown in infants and very young children reveals the evolution of the disease from the very early to the later phases showing partial healing by fibrosis and

calcification. The different phases are illustrated by lantern slides.

A discussion of the type of cases that should have special treatment.

2. "The Diagnosis and Treatment of Pulmonary Tuberculosis in Childhood"—Dr. Daniel Hudson, Ann Arbor.

A consideration of experiences with tuberculosis in childhood at Dr. Armand-Delille's Clinic in Paris. Early lesions in childhood and methods of diagnosis. Discussion of his treatment.

3. "Specific Infections of Infancy and Childhood"—Dr. Isaac A. Abt, Professor of Pediatrics, Northwestern University, Chicago.

4. "Diagnosis and Treatment of Acute Osteomyelitis in Children"—Dr. Grover C. Penberthy, Associate Professor of Surgery, Detroit School of Medicine.

Brief discussion of the usual history presented by these patients with a review of the incidence of this disease in different classes of children. A practical plan for working out the diagnosis and careful consideration of the treatment.

MORNING SESSION

September 17—9:15 A. M.

1. "Chronic Nephritis in Children"—Dr. M. Cooperstock, Ann Arbor.

Discussion of the various types and frequency of chronic nephritis in children. Comparison with the chronic nephritis of adults. Consideration of some of the outstanding clinical features of chronic nephritis with special reference to the significance of certain related alterations in the blood chemistry.

2. "Kidney Functional Test"—Dr. Floyd H. Lashmet, Ann Arbor.

This paper will be concerned with a discussion of the various types of kidney functional tests and their evaluation. Description of the technic used in our clinic.

3. "Acidosis, Alkalosis and Dehydration"—Dr. Alexis F. Hartman, Associate Professor of Pediatrics, Washington University, St. Louis, Mo.

The chemical composition of the body fluids and the normal means of their maintenance are illustrated. The effects of various abnormal conditions which lead to dehydration with acidosis or alkalosis are then discussed. A simple rational means of therapy is then presented.

4. "Diagnosis and Treatment of Common Skin Diseases in Childhood"—Dr. Clark W. Finnerud, Assistant Clinical Professor of Dermatology, University of Chicago, Chicago.

This paper will include discussion of eczema, seborrheic dermatitis, impetigo, scabies, ringworm, birthmarks and other affections.

AFTERNOON SESSION

September 17—1:30 P. M.

Election Chairman One Year.

1. "The Prevention of Rickets in Premature Infants by Use of Viosterol"—Dr. Earl W. May, Detroit.

It is clearly demonstrated in this paper that rickets can be prevented in premature infants by the use of Viosterol if dosage is sufficient. The material in this paper covers 1½ years' work on a large series of cases that has been checked clinically and through blood chemistry studies and X-ray.

2. "Clinical Use of Viosterol"—Dr. Henry G. Poncher, Chicago.

In our work we have established a daily minimum prophylactic dose for the average normal infant from birth to one year. Premature and rapidly growing infants demanded special consideration.

3. "Relation of Diet to Dental Caries"—Dr. R. W. Bunting, Professor of Oral Histology and Pathology, School of Dentistry, Ann Arbor.

This paper will be a review of the recent experimental work that has been done by several different groups on the relation of diet to the decay of teeth. An analysis and review of the work of May Mellanby, Sherman Davis and M. T. Hanke will be given and the results of a feeding experiment which we ourselves have conducted, including over 400 children in whom dental decay was almost entirely eliminated over a period of one year.

4. "Report of a Case"—Dr. Elmer L. DeGowin, Ann Arbor.

Anaphylactic shock following tetanus antitoxin given in small and divided doses. Brief review of the literature.

Section on Ophthalmology and Otolaryngology

MORNING SESSION

September 16,—9:15 A. M.

Round Table Conferences:

Eye Section: Dr. Harry Gradle, Chicago
Ear, Nose, Throat Section: Dr. A. C. Furstenberg, Ann Arbor

AFTERNOON SESSION

September 16—1:30 P. M.

1. Chairman's Remarks.
2. "A Statistical Analysis of Ophthalmic Patients"—Dr. Harry Gradle, Chicago. Discussion opened by: Dr. Parker Health, Detroit; Dr. John R. Rogers, Grand Rapids.
3. "Carcinoma of Larynx"—Dr. A. C. Furstenberg, Ann Arbor.

Discussion opened by: Dr. James T. Mills, Grand Rapids; Dr. Lee Simpson, Detroit.

4. "Hysterical Mastoiditis" — Dr. Carl McClelland, Detroit.

Discussion opened by: Dr. C. T. Proutt, Detroit; Dr. Emil Amberg, Detroit.

5. "Anesthesia in Head and Neck Surgery: Various Types and Methods"—Dr. Reuben Manrits, Grand Rapids.
Discussion opened by: Dr. Chas. W. Ellis, Lansing; Dr. A. R. McKinney, Saginaw.

MORNING SESSION

September 17—9:15 A. M.

Round Table Conferences:

Eye Section: Dr. Walter Parker, Detroit
Ear, Nose, Throat Section: Dr. Samuel Iglauer, Cincinnati

AFTERNOON SESSION

Election of Chairman and Secretary

1. "Deep Suppuration in the Pharynx and Neck as it Concerns the Laryngologist"—Dr. Samuel Iglauer, Cincinnati.
Discussion opened by Dr. Neil I. Bentley, Detroit; Dr. Carl G. Wencke, Battle Creek.
2. "Detachment of the Retina"—Dr. Walker Parker, Detroit.
Discussion opened by: Dr. Robert J. Laird, Grand Rapids; Dr. Howell L. Begle, Detroit.
3. "Radical Surgery of the Frontal Sinuses"—Dr. H. O. Westervelt, Benton Harbor.
Discussion opened by: Dr. Ferris Smith, Grand Rapids; Dr. J. K. Heckert, Lansing.
4. "Iodized Oil Injection into the Sinuses"—Dr. E. L. Whitney and Dr. H. P. Doub, Detroit.
Discussion opened by: Dr. Robert H. Fraser, Battle Creek; Dr. Wm. E. McGarvey, Jackson.

HOUSE OF DELEGATES

Place: Hotel Whitcomb, St. Joseph.

Time: 10:30 A. M., September 15.

Speaker: H. J. Pyle, Grand Rapids.

Secretary: F. C. Warnshuis, Grand Rapids.

ORDER OF BUSINESS

1. Call to Order.
2. Roll Call and Report of Credentials Committee.

3. Speaker's Address—H. J. Pyle.
4. President's Address—J. D. Brook.
5. Annual Report of the Council—R. C. Stone.
6. Appointment of Reference Committees.
7. Election of Nominating Committee.
NOTE: No two members from one Councilor District shall be elected on the Nominating Committee.
- Duty of Nominating Committee:
 - (a) Supervise Ballot for President.
 - (b) Nominate Vice Presidents.
 - (c) Nominate A. M. A. Delegates to succeed: C. S. Gosline, J. D. Brook, A. W. Hornbogen, and Alternates J. Wessinger, C. E. Boys and J. G. R. Manwaring.
 - (d) Designate place of next Annual Session.
8. Reports of Committees:
 - Medical Education.
 - Public Health.
 - Legislation.
 - Tuberculosis.
 - Civic and Industrial Relations.
 - Medical History.
 - Delegates to the A. M. A.
 - Venereal Prophylaxis.
9. Resolutions and New Business.
10. Recess.

SECOND SESSION

2:30 P. M.

1. Roll Call.
2. Report of Reference Committees.
3. Revision of Constitution and By-Laws.
4. Unfinished Business.
5. New Business.

THIRD SESSION

7:30 P. M.

1. Roll Call.
2. Report of Reference Committees.
3. Report of Nominating Committee.
4. Elections:
 - (a) Vice Presidents.
 - (b) Place of Annual Session.
 - (c) Delegates and Alternates to A. M. A.
 - (d) Councilors:
 - First District
 - Second District
 - Third District
 - (e) Speaker.
 - (f) Vice-Speaker.
5. Unfinished Business.
6. Adjournment.

COMMITTEE REPORTS

TUBERCULOSIS

As chairman of the Committee on Tuberculosis I wish to state that we have no recommendations to the House of Delegates, but we have been very favorably impressed with the following points:

(1) The increase of available beds for tuberculous patients in the state. Although this is not what many desire, there is a slow but steady progress.

(2) Through the efforts of our State Medical Society conferences and clinics there is a much keener perception in diagnosis and cases of tuberculosis are found much earlier, which, as a rule, means better chances of recovery, less economic waste and more happiness.

(3) The general attitude of the public has changed materially. It is more receptive towards the tuberculosis solution. There is a greater tendency towards coöperation with the family physician,

sanatorium head and health officer. Physicians who are confining their time exclusively to the diagnosis of tuberculosis are showing more conservative attitudes in the diagnosis of early tuberculosis and are insisting on a thorough general investigation before a final diagnosis is made.

STUART PRITCHARD, M.D.

HOSPITAL SURVEYS

To the House of Delegates:

There has been no occasion for our committee to convene during the year 1929-30, consequently I have no report to present.

C. F. DuBois, M.D., *Chairman*,
A. M. A. Hospital Survey Committee.

COMMITTEE ON PUBLIC HEALTH

Your Committee on Public Health begs to make the following report:

We ask for your indulgence in a certain lack of actual constructive work for the past year, calling attention to the fact that a new chairman and a practically new committee were called upon to act. It has been a somewhat inactive committee for several years, and yet we feel that there is a lot of necessary constructive work that should be given their earnest attention this coming year.

This committee has usually been closely associated with the State Board of Health in any cooperative movement between that body and the medical fraternity of Michigan. The past year has called for no such action. We have at present a new Commissioner of Health for our State, who may, or may not, feel the necessity of coöperation with us. In case such action should arise, however, we shall be ready to lend any aid that is necessary.

It is a great loss to the members of this committee in no longer having the leadership of Dr. Guy Kiefer, who has given so much to the State of Michigan in public health work, and we feel that a great deal of credit should go to the past members of this committee, who worked with him at the time of his induction into office, to restore the public health work to the medical fraternity of Michigan.

It is the opinion of this committee that a newer type of public health work is coming into existence. We wish to call attention to the work of the Joint Committee on Public Health which, although not connected with this committee as originally conceived, still is carrying on work which we feel will be far reaching in its effect, that is the teaching of health to the coming generation, and essentially striving for the same ultimate end as your Public Health Committee.

This brings us to the recommendations which we wish to lay before the members of the House of Delegates and ask for your consideration. If you consider our recommendations as worth while and constructive, we ask that you take action which will give us your consent to pursue further research and investigation into the problems which we will enumerate.

We have two projects that are receiving considerable attention by the lay public as well as the profession at the present time. Some of these problems which we propose to enumerate may seem obscure and call for considerable discussion. Some communities have undoubtedly already solved these problems. We feel that as a whole, however, as far as public health is concerned in the immediate future, these projects are of major importance to the interested lay public, and unless our society takes a definite stand they will drift under the control of so-called lay organizations with considerable embarrassment later to the profession on the grounds of non-coöperation.

No ideas or methods of application of any of these problems have been entertained by your committee and we ask at this time that such will not be discussed, as confusion will result, the regular order of business delayed, and your committee will not be able to undertake the work with a free and open mind.

Our first problem is that of the *annual examination of preschool children* or the so-called summer round-up as conceived by the national order of Parent-Teacher Associations which has a strong constituency in the State of Michigan.

This organization has as one of the principles of their order, the examination of children of preschool and school age. As carried out in Michigan, outside of a few communities, the work has been improperly organized, non-constructive due to lack of proper records and follow-up work, and a burden to the local medical men who have been called on for examinations without a clear knowledge of what it's all about.

Your committee asks that this representative body, the House of Delegates of the Michigan State Medical Society, grant your health committee the necessary permission and expense to carry on a questionnaire investigation and research of this problem.

We propose to submit the following propositions to the constituent societies of the Michigan State Medical Association:

1. Are you in favor of coöperating with the Parent-Teacher Association in promoting health among the school and preschool children? If so, which of the following methods do you prefer.

A. The family physician to examine children brought in by parents through educational campaign conducted by the Parent-Teacher organization. The usual fee for such examination in your community to be charged.

B. School boards or Parent-Teacher organizations should hire physicians for group examinations. Fee charged to be set by physicians employed.

C. Physicians to volunteer free services in clinics held at school or health center.

D. Physicians to make office examinations for a minimum fee, and indigent cases properly certified by social workers or school nurses examined gratis.

E. All cases appearing for examination provided with blanks will be examined free by the physicians.

We wish to call to your attention that this is not a local problem but is one general to every urban and rural community in the state. Also present methods carried on in some communities are not agreeable to others.

Your committee does not wish to take on the responsibility of advising any particular method, but feels that this situation should be thoroughly investigated and a complete report made to the House of Delegates in 1931.

The second project which is along a similar line, the protection of juvenile health, has been very well dealt with in many communities. This committee feels that the Wayne County Society in particular has handled the situation in an excellent manner, that is, the diphtheria prophylaxis and their method could very well be made a standard for the rest of the societies of the state.

In previous years there have been prophylaxis campaigns for smallpox vaccine, as well as diphtheria, and with the possible discovery in the future of other preventive measures, we feel that a general plan of action should be laid down by this society. In the past there has been confusion with the State Board of Health, local boards of health, and the medical profession as represented by the private practitioner.

In order that a universal plan may be worked

out, one that has a certain degree of mobility for different situations, we feel that a canvass of the constituent societies of the State organization should be carried on so that the various plans now in effect may be investigated and one adopted which has a universal application. Therefore, your committee asks that it be given permission and the necessary expense to carry on a questionnaire investigation among our members to determine the best plan for carrying on of disease prevention in those cases where inoculative prophylaxis has been proven rational and necessary for public health. The following propositions to be studied as to their acceptance:

1. The family physician to inoculate children brought in by parents through educational campaigns conducted by health agencies and the medical societies. Usual fee for such service in your community to be charged.

2. Local boards of health should hire physicians to administer preventive measures. Fee charged to be set by physicians employed.

3. Physicians to volunteer free services in clinics to be held by local boards of health or the State Board of Health.

4. Physicians to make office administration for a minimum fee where serum or vaccine is furnished by the State or local health authorities, and indigent cases properly certified to by social workers inoculated gratis.

5. Vaccines, toxin-antitoxins or other immunizing preparations to be administered by the State Board of Health or local boards of health for a fee or gratis and the practicing physician relieved of such work.

We again ask that these propositions not be discussed at this time, but that the report of this committee be accepted or rejected.

If accepted, the necessary expense of stationery and postage or other incidental expense in carrying on this investigation be appropriated as needed by the Council of the State Society with that body to govern and control the amount necessary.

W. C. ELET
GEORGE SOUTHWICK
A. L. CALLERY
H. M. JOY
PHILIP RILEY

MEDICAL HISTORY

To the House of Delegates,
Michigan State Medical Society:

This time the annals of the Committee on Medical History are short and simple.

Distribution to subscribers of the first volume of 829 pages was completed in July. On all hands the format of this has been pronounced handsome and artistic. It is the work of the Bruce Publishing Company of Saint Paul, and high praise is merited for its craftsmanship.

At this writing Volume II is well under way. Four of its twelve chapters have been read in galley proof and it is expected by the publishers that it will be brought to completion before the forthcoming State Medical Society meeting, although vacation absences from the printery may retard the work.

Double indexing for both volumes is required. This is a tedious task, particularly during, so-to-speak, "hot-dog" days, and the Committee is determined that it shall not be, in addition, a thankless one. To Miss Olive V. Seibert of the Bruce Company who voluntarily assumed it, sincere gratitude is expressed.

Two collaborators, Drs. William John Kay and Guy Lincoln Kiefer, have departed from earth

recently, the latter as the first volume, to which he contributed, was going to press.

Vale, to these beloved associates.

In conclusion, on behalf of the committee members, Drs. Dempster, Sawyer and Winchester, as well as my own, heartfelt and cordial thanks are extended to all who have assisted in the enterprise.

Faithfully yours,

C. B. BURR, *Chairman*.

CIVIC AND INDUSTRIAL RELATIONS

To the House of Delegates of the
Michigan State Medical Society:

The Civic and Industrial Relations Committee had a meeting at the Book-Cadillac Hotel at Detroit on December 9, 1929. Since that time, business has been transacted by correspondence between the chairman and committee members. The following subjects have been considered, the first three being of major importance:

1. VIOLATION OF MEDICAL PRACTICE ACT IN FACTORY CLINICS

This matter has been carefully studied by the committee. It was presented to the East Side Physicians' Association of the Wayne County Medical Society and also the Michigan Association of Industrial Physicians and Surgeons at their annual meeting in Flint on April 25, 1930. At the latter meeting, your chairman read a paper entitled, "The Relationship of the Physician to Industry," in which the subject of factory clinics was discussed and definite recommendations were made. The Michigan Association of Industrial Physicians and Surgeons is composed of physicians actively engaged in industrial practice and intent upon establishing definite policies governing such practice. With coöperation of this organization, the Civic and Industrial Relations Committee should be successful in controlling any undesirable conditions. In conformity with Resolution No. 3, passed at the annual meeting at Jackson in 1929, *i.e.*,

"RESOLVED, that the Michigan State Medical Society enlist the coöperation of the State Nursing Association, Manufacturers' Associations and the Chamber of Commerce of each city in adopting a policy governing the practice of nurses and other persons in charge of first-aid departments of industrial corporations, etc. . . ."

the Civic and Industrial Relations Committee have solicited the Michigan Association of Industrial Physicians and Surgeons, through its president, Dr. C. S. Gorsline of Battle Creek, also a member of the Civic and Industrial Relations Committee, to work in liason with them. It is expected that something definite will develop during the coming year to govern this practice.

It has also been suggested that greater coöperation could be secured if the Michigan Association of Industrial Physicians and Surgeons would affiliate with the Michigan State Medical Society as a section of the latter organization and in this way work under one administration. At present, the Industrial Physicians' and Surgeons' Association is unfavorable to this, but is very willing to work as a separate organization coöperating with the Civic and Industrial Relations Committee of the State Society. There is no reason to expect other than perfect harmony.

2. RESPONSIBILITY FOR PAYMENT OF HOSPITAL AND PHYSICIANS' SERVICES IN HIGHWAY ACCIDENTS

Resolution No. 4, passed at the annual meeting in 1929:

"RESOLVED, that the Michigan State Medical Society enlist the coöperation of similar committees of the Michigan State Hospital Association, Automobile Associations, Chambers of Commerce,

and City and State Traffic Departments in making a thorough study of this problem, etc. . . ."

The Civic and Industrial Relations Committee wish to report that a conference was held with Dr. D. M. Morrill, president of the Michigan State Hospital Association, and the chairman of your committee immediately after the annual meeting in 1929. As a result of this conference, the Michigan State Hospital Association, through its president, appointed a committee from that organization to study the question. For obvious reasons, your committee believe that action should originate in the hospital association rather than the medical society. The committee consisted of Sidney G. Davidson, superintendent of Butterworth Hospital, Grand Rapids, chairman, Mr. Frank King, superintendent of Hurley Hospital, Flint, and Dr. Stuart Hamilton, superintendent of Harper Hospital, Detroit. This committee made a study of the question and reported at the state meeting of the hospital association held in Grand Rapids, May 28 and 29, 1930, at the Pantlind Hotel. As a result of the activities of this committee, subsidiary committees have been appointed in the cities of Detroit, Flint and Grand Rapids, enlisting the support of police departments, legislators and representatives of other influential organizations, in securing the passing of a law governing traffic accident responsibility at the coming Legislature. It is the intention of the hospital committee to call a later meeting of representatives from the various allied organizations. The Michigan State Medical Society will doubtless be represented at that time.

Your chairman has personally taken this matter up with one member of the State Judicial Council, recently appointed by Governor Green. It is assumed that this body will be interested in the subject and that we may expect their coöperation. This is a project that will take some time to accomplish, but the committee believes that it has at least made a beginning.

3. FEE SCHEDULE

Simultaneously with the recommendation of the Civic and Industrial Relations Committee that an industrial fee schedule for compensation cases be proposed and adopted in this state, the Michigan Association of Industrial Physicians and Surgeons, at its annual meeting, also made this same recommendation. Your chairman had a conference with the president of the latter organization, Dr. Gorsline, who has agreed to coöperate with your committee in making an immediate study of this problem. The procedure recommended is that the Civic and Industrial Relations Committee meet with a similar committee from the latter association and call into conference a representative committee from the Casualty and Liability Insurance Companies authorized to write compensation insurance in the State of Michigan. In this manner, the question can be thoroughly and impartially discussed. We are quite sure that a satisfactory agreement will ultimately be reached. The insurance companies have already been asked to appoint such a committee.

4. OLD LINE LIFE INSURANCE COMPANIES

The committee wish to report that in conformity with Resolution No. 1, passed at the annual meeting last year, in which it was

"RESOLVED, that Physicians charge a fee of not less than \$2.00 to Old Line Life Insurance Companies for rendering special reports of the health and physical condition of prospective applicants for insurance, etc. . . ."

that these Old Line Life Insurance Companies apparently are coöperating. To date only one complaint has been received, in which there was refusal to pay for filling out a claim.

5. HEALTH AND ACCIDENT INSURANCE COMPANIES

Resolution No. 2, passed at the annual meeting last year

"RESOLVED, that physicians charge a fee of not less than \$2.00 for each preliminary and final claim proof, etc. . . ."

has received considerable comment from physicians throughout the State. Several cases are on record in the chairman's office, in which the insurance companies have refused to honor statements of physicians for services rendered within the meaning of the resolution. Correspondence from insurance companies indicates that they do not intend to consider the physicians in this matter. The resolution apparently is weak and does not contain an alternative for the physician to resort to in case the insurance company refuses payment.

Your committee suggests that physicians refuse to fill out blanks for health and accident insurance companies unless payment is guaranteed to the physician by the insurance company, either direct or through the claimant, before the report is filled out.

Your committee further recommends that an ultimatum be delivered to each insurance company that the members of the Michigan State Medical Society refuse to fill out insurance blanks unless payment is guaranteed in this way. Ultimately it will mean that insurance companies will provide for payment for such services in the original contract or policy, which is issued to the claimant, and so advise him at the time it is purchased. The committee therefore makes this recommendation and asks that, if adopted, they be authorized to notify all insurance companies in accordance with the following resolution:

WHEREAS, the Michigan State Medical Society passed a resolution, at its annual meeting in Jackson, Michigan, September 17, 1929, regarding the filling out of claim proofs of Health and Accident Insurance Companies, and

WHEREAS, the responsibility for the payment of a fee to the physician for such services was placed upon the insurance company, and

WHEREAS, it was resolved that such fee be not less than \$2.00 for each preliminary and final claim proof, the fee to be increased according to the type of service rendered, and

WHEREAS, since the adoption of this resolution the majority of Health and Accident Insurance Companies have disputed their responsibility to pay the physician, therefore

BE IT RESOLVED, that physicians refuse to fill out blanks for any insurance company unless payment is guaranteed to the physician by the insurance company, either direct or through the claimant, before the report is filled out, and

Further, that the home office of each insurance company be notified that the members of the Michigan State Medical Society have adopted this resolution.

Respectfully submitted,
HARRISON S. COLLISI, *Chairman*.

MEDICAL EDUCATION

F. C. Warnshuis, M.D., Secretary,
Michigan State Medical Society,
1508 G. R. National Bank Bldg.,
Grand Rapids, Michigan.

Dear Dr. Warnshuis:

In reply to your letter of the 24th, the Committee on Medical Education reports progress. Nothing of exceptional interest has occurred during the year.

Yours very truly,
ANDREW P. BIDDLE, *Chairman*.

REPORT OF THE COMMITTEE ON LEGISLATION AND PUBLIC POLICY

Your Committee on Legislation and Public Policy herewith submits the following report:

During the year, the Committee has held four meetings in conjunction with various members of the Council. At one of these meetings held in Ann Arbor, the chairmen of the legislative committees of the county medical societies were invited to attend. Approximately forty attended this meeting.

The deliberations of the Committee have been largely concerned with a review of recent proposals, bills and legislations relative to medical practice acts. The following were given particular attention:

1. A reorganized strong State Department of Education as the Medical Licensing Agency.
2. State University as the Licensing Agency.
3. Basic Science Statute.
4. Board of Professional Registration,—Michigan's Medical Practice Acts legislation 1929.
5. Enforcement of Medical Practice Acts
Annual Registration
Grievance Committee.

Members of the Committee and members of the Council who have attended these meetings have been much interested in the proposal that the functions and powers of licensure for the practice of the healing arts be transferred to a reconstructed strong Michigan State Department of Education similar in many respects to the Department of Education in the State of New York. The following points have impressed the Committee with the soundness and desirability of this suggested transference.

1. The biggest job in the processes of any licensure is determining the character and quality of education and training of the applicant as these apply to the special work the applicant desires to carry on. The processes of determining this involves knowledge of the quality of the professional and pre-professional education of the applicants. This demands familiarity with the character and standing of the many schools, colleges, universities and professional schools in our country and abroad. Constant study of educational problems and trends of courses, of catalogues, of teaching personnel, of school administration, of the nature and quality of the work offered, and so on, is essential. All of this involves an extensive library of catalogues, of journals, and of reprints and other accounts of contributions to general, higher, and professional education which appear from time to time.

Moreover, we must realize that this process of looking into the educational qualifications and determining the quality of professional training is becoming a specialty in itself which demands the full time services of specialists along this line. An efficient state board of education with its specialists, special library, and other machineries, concerned with the entire run of education, from elementary through professional education and training, could and should be the best qualified agency in the state to determine the quality of education and training of applicants for licensure in the various professions including medicine. For, to repeat, *it is the nature and quality of education and training of the applicant that should be of primary consideration in all licensure proceedings*, and this can be ascertained largely through knowledge of the standing of the school and of the applicants record at the school.

2. The position of proprietorship, or idea of "proprietary interest" in medical practice acts, of owning and controlling them, *can be effectively answered and combatted only by taking from the medical profession itself matters pertaining to medical licensure*. As long as the medical profession has its own licensing board, dogmas and tenets of medical practice may and will present this question to

legislatures: "The medical profession has its licensing board, why cannot we who practice medicine according to other systems have our own examining and licensing boards to determine the qualifications of those who would practice according to our tenets?"

3. If all the functions and powers of medical practice licensure were transferred to a state department of education, then, culs cannot persistently and plausibly ask for licensing boards of their own. Any attempted legislation along this line would be referred to the department of education. The medical profession, therefore, would be released, in a very large measure, from an activity which has taken up a great deal of its time,—that of seeing to it that the public is protected from incompetent and fraudulent medicine.

4. This suggested bill would give to the Board of Education all the functions and powers of licensure for several professions and for all future professions asking for licensure, this would be a great contrast to the multiplicity of existing independent examining and licensing boards for various professions. The work of all these might well be centralized and handled through such a central agency as this suggested function for the State Department of Education. Also future requests for examining and licensing boards, and these will be many, will be referred to this Department. This would give our legislatures opportunities for genuine constructive statesmanship. At present, much of the time of the legislature is taken up with matters pertaining to professional licensing boards.

5. There would be other advantages to and increased effectiveness in scientific medicine and public health work if provisions for medical licensure were associated in this way with public education and other professions. The practice of scientific medicine would become closely tied up with the teaching professions and with the other professions in seeing to it that the people of Michigan are given the highest quality of service. In this unity there will be strength.

In view of these advantages, your Committee has felt that earnest consideration be given to the proposition that the functions and powers of medical licensure be transferred to the State Department of Education. At one of the sessions of the Committee, the State Superintendent of Public Instruction was present and the proposal was put up to him. His reaction was that the proposal was meritorious and was worthy of earnest consideration. He called attention to the fact that in order to reorganize and enlarge the functions of the present office of the State Department of Public Instruction, certain changes in the constitution would have to be made and to do this the matter would have to go to a popular vote.

A committee of the Michigan Teachers Association has had under consideration the matter of strengthening the State Department of Public Instruction. Your Chairman has had one conference with the President of the Michigan Teachers Association and has been invited to attend a meeting of this committee in September, 1930.

Your Committee in conjunction with this committee of the Michigan Teachers Association will give serious consideration to this proposal of a strong, well supported State Department of Education with a view of empowering it to make rules and regulations relative to the granting of licenses to all who desire to practice and healing arts. The Committee feels that in this proposed law no recognition be made of the various tenets and dogmas of medical practice. Moreover, your Committee feels that the proposed law should include provisions relative to adequate financial support whereby the law

may be effectively enforced. Perhaps some such provisions as those now included in Webb Loomis Act in the State of New York for the enforcement of the medical practice act will be given serious consideration by your Committee. At any rate, your Committee is of the opinion that any law relative to medical practice should include provisions for the support of vigorous enforcement of the law.

In view of the fact that much serious consideration and effort must be put into this proposal of transferring the functions and powers of medical licensure to a reorganized, well supported and strong State Department of Education, it is obvious that considerable time must elapse in order to bring this matter about. It is a proposition on which much study must be centered by the Michigan Teachers Association, the Superintendent of Public Instruction, and others interested and concerned. It is the purpose of your Committee to follow this matter up during the forthcoming year. Assuming that favorable action will be taken on this proposal by all concerned, it cannot be anticipated that all the matters concerned with the preparation and presentation of a bill which has for its object the incorporation of the functions and powers of Medical licensure within the jurisdiction of the State Department of Education can be made for presentation at the 1931 meeting of the Michigan Legislature.

As has already been pointed out, the amendments and changes which must be made in order that the present State Department of Public Instruction may function as a licensing agency for the medical profession, are matters which involve the constitution of the State and therefore must go to a popular vote. Final action on this whole matter cannot be anticipated before the 1933 legislature.

Your Committee, therefore, is of the opinion that no medical practice acts bills, on the part of the medical profession, should be prepared and presented at the forthcoming Michigan Legislature of 1931. Moreover, your Committee recommends that the Governor and members of the forthcoming Legislature, with a view of getting their approval and help, be apprised of the joint efforts which are now being made with a view of improving our present system of professional licensure in the State of Michigan.

Your Committee feels that the Governor and the Legislature will be much interested in a study and recommendations relative to legislation which will help to solve and to settle this matter.

Your Committee trusts that its actions so far will meet with the approval of the Michigan State Medical Society. Moreover, it recommends that the Society will be actively interested in opposing any and all efforts on the part of any dogma or tenet in the practice of the healing arts to seek any medical practice acts legislation during the forthcoming legislative year, 1931. It sincerely trusts that the Governor and the Legislature will be persuaded to defer any action relative to medical practice bills which may be introduced at the 1931 Legislature until a report of joint deliberations of the Michigan Teachers Association, the Michigan State Medical Society and other agencies concerned is forthcoming. Your Committee earnestly requests the active support of the Medical Society in helping it to deal with its immediate problem;—that of deferring any legislation relative to the practice of the healing arts which may be sponsored by any dogma or tenet during the forthcoming 1931 session of the Legislature.

The Chairman of your Committee on legislation and Public Policy has written this report during a sojourn in California in connection with the Summer Session of the University of California. This report has been hastily written in response to an urgent request from the Secretary of the Michigan

State Medical Society. The Chairman, therefore, has not had the opportunity of submitting this report to other members of the Committee and to the members of the Council who have attended the meetings. He must, therefore, assume full responsibility for this report and he trusts that he has put down the reactions of the other members of this Committee.

Respectfully submitted,
JOHN SUNDWALL.

PROPOSED NEW CONSTITUTION AND BY-LAWS OF THE MICHIGAN STATE MEDICAL SOCIETY

To be presented at the Annual Meeting of the House of Delegates in Benton Harbor on
September 15, 1930

J. G. R. MANWARING, *Chairman*
R. R. SMITH FRED DIBBLE

—Constitution—

ARTICLE 1—NAME

Section 1. The name of this organization shall be the Michigan State Medical Society.

ARTICLE 2—PURPOSE

Section 1. The purposes of this Society are to promote the science and art of medicine, the protection of public health and the betterment of the Medical Profession; and to unite with similar organizations in other States and Territories of the United States to form the American Medical Association.

Section 2. This Society as a State unit of the American Medical Association, and as the State expression of the component county societies of Michigan, shall have three major divisions:

1. The Society as a whole, as when it meets in general session.
2. The Scientific Assembly and its subordinate or related body.
3. The House of Delegates and its subordinate or related body.

Section 3. The terms "county medical society" and "component county medical society" shall be deemed to include all county medical societies now in affiliation with this Society or which may be hereafter organized and chartered by the Council.

Section 4. Only one component county society shall be chartered in any one county of the State; Provided, however, when in the judgment of the House of Delegates or of the Council it is deemed to be to the best interest of this Society, a charter may be granted to a component society comprising two or more counties.

ARTICLE 3—MEMBERS

Section 1. This Society shall consist of members, honorary members and fellows who shall be the members of component county medical societies who have been certified to the Secretary of this Society and whose current dues have been paid.

Section 2. Qualifications—Active members shall comprise all the active members of a component county society. No person shall be eligible for election to active membership in a component county society unless he shall hold the degree of Doctor of Medicine, issued to him by an institution of learning accredited by the American Medical Association, at the time of conferring such a degree. He must also hold an unrevoked license to practice medicine and surgery in the State of Michigan.

Section 3. Honorary Members—The House of Delegates on recommendation of a county society and approval by the Council may elect as an honorary member any persons distinguished for their services or attainments as Doctors of Medicine, or in the field of public health, or for research or other scientific work contributing to medicine. Honorary

members shall not pay dues and shall not have the right to vote or hold office.

Section 4. Fellows—County Societies may elect as Fellows any persons distinguished for their services in the allied sciences or in the field of public health, and upon recommendation of a county society, approved by the Council, the House of Delegates may elect such nominees as Fellows of this State Society. They shall not pay dues in the State Society nor shall they have the right to vote or to hold office.

Section 5. Retired Members—Members who have maintained their membership in a component county society of the State Society for a period of ten or more years, and who are certified by their county society as having retired from practice may be transferred to the retired members' roster. They shall be entitled to receive the publications of the Society at such rates as the Council may from time to time determine. They shall not have the right to vote or to hold office.

ARTICLE 4—HOUSE OF DELEGATES

Section 1. The House of Delegates shall be the legislative body of the Society, and shall consist of Delegates elected by component county societies, and the Officers of the State Society.

Section 2. Composition. The House of Delegates shall be composed of delegates elected by the component county societies. Each county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members and one delegate for each additional major fraction thereof. Any county society which holds a charter from this Society and has less than fifty members shall be entitled to send one delegate if its annual report has been properly filed with the Secretary.

Section 3. The officers of this Society and the members of the Council shall be ex-officio members of the House of Delegates without power to vote.

Section 4. The House of Delegates shall transact all the business of the Society not otherwise specifically provided for, it shall adopt rules and regulations for its own government and for the administration of the affairs of the Society; it shall provide for a division of the scientific work of the Society into appropriate sections, and, it shall provide for the organization of Councilor Districts.

Section 5. Elections. The House of Delegates shall at the regular annual session elect the President-Elect, the President, a Speaker and a Vice-Speaker of the House of Delegates and the members of the Council.

ARTICLE 5—THE COUNCIL

Section 1. The Council shall be the Executive Body of the Society. The Council shall have the full authority and power of the House of Delegates between annual sessions, unless the House of Delegates shall be called into special session as provided for in the By-Laws. It shall consist of the Councilors, the President, the President-Elect, the Secretary and the Treasurer of the Society. Eight of its members shall constitute a quorum. The President, the President-Elect, the Secretary and the Treasurer shall be ex-officio members and without the right to vote.

ARTICLE 6—SCIENTIFIC ASSEMBLY

Section 1. The House of Delegates may provide for a division of the scientific work of the Society into appropriate sections and for the organization of such Councilor District Societies as will promote the best interest of the profession.

Section 2. The Scientific Assembly of the Society is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of medicine, its allied specialties and the problems of public health conservation.

Section 3. The Scientific Assembly is divided into sections, each section representing that branch of medicine described in its title.

Section 4. New sections may be created or existing sections discontinued by the House of Delegates. The Scientific Assembly and its component sections shall be conducted in accordance with the provisions of the Constitution and By-Laws.

Section 5. The program for the Scientific Assembly shall be arranged by the committee on scientific work, composed of the officers of the several sections. They shall submit their programs for approval to the Executive Committee of the Council.

ARTICLE 7—SESSIONS AND MEETINGS

Section 1. The Society shall hold an annual meeting at such time and place and of such duration as the House of Delegates and the Council may determine. The session shall be open to all members, delegates, and invited guests, who are in good standing in the Society.

Section 2. Special meetings of the Society may be called for general session on the petition of the Council, or by a petition signed by two hundred and fifty members, or upon petition of forty delegates registered at the previous regular session. The call for regular and special sessions shall be issued by the President and Secretary, complying with these provisions, and shall go forth not later than thirty days before the proposed date of holding a regular or special session.

Section 3. Special meetings of the House of Delegates may be called by the Council, on a petition signed by thirty delegates who served at the last regular session of the House. It is distinctly provided that in petitioning for a special session of the House of Delegates not more than five petitioners shall come from one county society.

ARTICLE 8—OFFICERS

Section 1. The officers of this Society shall be a President, a President-Elect, a Treasurer, a Secretary, an Editor, a Speaker and Vice-Speaker of the House of Delegates, and a Board of Councilors of such number as the House of Delegates may fix from time to time.

Section 2. The President, the President-Elect, the Councilors, the Speaker and the Vice-Speaker shall be elected annually by the House of Delegates. The Secretary, the Editor and the Treasurer shall be elected by the Council at its annual meeting in January of each year. The Councilors shall be elected for a term of five years each. These terms to be so divided so that no more than four Councilors are elected at any annual session. All these officers shall serve until their successors are elected and installed.

ARTICLE 9—FUNDS AND EXPENSES

Section 1. The annual membership dues shall be fixed by the House of Delegates.

Section 2. The funds of the Society shall only be disbursed on order or action of the Council.

Section 3. The invested funds of the Society shall be delivered to the Treasurer by the Secretary.

Section 4. The Secretary shall collect all annual dues and all monies owing to the Society, depositing them in an approved depository and disbursed by him upon order of the Council. The Council shall cause an annual audit to be made of the funds of the Society by certified public accountants, and shall require the Treasurer and the Secretary to be bonded for an adequate amount.

ARTICLE 10—REFERENDUM

Section 1. At any general meeting of the Society it may by a two-thirds vote order a general referendum upon any question pending before the House of Delegates. The House of Delegates may by a vote of its members, submit any question to the membership of the Society for its vote. A majority vote of all the members of the Society shall determine the question and be binding.

ARTICLE 11—SEAL

Section 1. The Society shall have a common seal. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE 12—AMENDMENTS

Section 1. The House of Delegates may amend any article of this constitution by a two-thirds vote of the Delegates present at any annual session, provided that such amendment shall have been presented in open meeting at the previous annual session, and that it shall have been published at least once during the year in the Journal of the Society, or sent officially to each component society at least two months before the meeting at which final action is to be taken.

Section 2. This constitution shall become effective immediately upon its adoption.

—By-Laws—

CHAPTER 1—MEMBERSHIP

Section 1. The charter of each component County Society shall provide that all the provisions of the Constitution and By-Laws of this Society, together with all amendments to either thereof hereafter adopted, insofar as the same are applicable, shall be an integral part of the Constitution and By-Laws of the component County Society to which a charter is issued, and that the terms and provisions thereof shall control and govern such component county society, the officers and members thereof, and that the Constitution and By-Laws of the component county society shall not be amended in any way to conflict or be inconsistent with the Constitution and By-Laws of this Society.

Section 2. The Charter of any component county society may be revoked by the House of Delegates if, after filing with the Secretary of this Society a written petition signed by the Chairman of the Council pursuant to a resolution adopted by the Council with the affirmative vote of two-thirds of all the members thereof, and, after due notice of hearing and after hearing thereof, the House of Delegates by a two-thirds vote of its members decides that the provisions of the Constitution and By-Laws of this Society have been breached, or that such County Society has committed acts or conducted itself in conflict with the Constitution and By-Laws or provisions of this Society to such an extent as to make such revocation desirable in the best interests of this Society.

Section 3. All members of the component county societies who are not in arrears for dues shall be privileged to attend all meetings and take part in all the proceedings and shall be eligible to any office within the gift of the Society except as otherwise provided.

Any member in arrears for dues for the amount of one year or more may regain membership either by paying up all back dues or by being again elected to membership, at the option of the county society.

Section 4. Inasmuch as the county society is the only door of admission to this State Society and to the American Medical Association, the county society shall be the judge of the qualifications of an individual for election and continuance of membership subject, however, to the right of appeal to the Council from the action recorded by the County Society.

Section 5. No member who is under sentence of suspension or expulsion from any component society of this Society, or whose name has been dropped from its roll of members shall be entitled to any of the rights or benefits of this Society.

CHAPTER 2—GENERAL MEETINGS

Section 1. During each Annual Session the Society shall hold one or more general meetings. The number and time of these general meetings are to be determined by the Council with or without the recommendation of the House of Delegates. Each general meeting shall be presided over by the President or in his absence by the President-Elect or the Chairman of the Council.

Section 2. The following shall be the order of business of the first general meeting:

1. Call to Order
2. Address of Welcome
3. Announcements and Report of the House of Delegates
4. President's Annual Address
5. Special addresses
6. Resolutions and Motions
7. Introduction of new President-Elect.

Section 3. All the registered members at an Annual Session shall have an equal right to participate in the deliberations of an Annual Session and to vote on pending questions.

Section 4. The General meeting or any of the sections may recommend to the House of Delegates or to the Council the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and the public. No action taken at the general meeting shall be in conflict with the provisions of the Constitution and By-Laws.

CHAPTER 3—HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet annually at the time and place of the Annual Session and may hold such number of sessions as the House may determine and its business require. Adjourning from day to day as may be necessary to complete its business and specifying its own time for the holding of its sessions.

Section 2. A Delegate must have been a member of the Society for at least two years preceding his election.

Section 3. A delegate once seated shall remain a delegate through the entire session and his place shall not be taken by any other delegate or alternate.

Section 4. The officers of county societies shall certify to the State Secretary the names of the delegates and alternates who shall represent them at the annual meeting.

Section 5. Thirty delegates shall constitute a quorum of the House of Delegates.

Section 6. The officers of the House of Delegates shall be a Speaker and Vice-Speaker. The Secretary of the State Society, elected by the Council, shall be the Secretary of the House of Delegates.

Section 7. (a) The House of Delegates is the legislative body of the Society, and shall have authority to adopt and institute such methods and measures as it may deem most efficient for the up-building and establishing of the interests of the profession in Michigan.

(b) It shall concern itself and advise as to the interests of the profession and of the public in those matters of legislation pertaining to medical education, medical registration, medical laws and public health.

(c) It shall be active in the education of the public in regard to medical research and scientific medicine.

(d) It shall elect delegates and alternate delegates to the American Medical Association in accordance with the regulations of that parent association.

(e) It shall divide the State into Councilor districts and direct the formation of district societies.

(f) It shall have the authority to appoint committees, standing or special, from among its members or the members of the society. Such committees are to report to the House of Delegates and their members may participate in the debate upon their committees' report.

(g) It shall approve all memorials and resolutions in the name of the Society before the same shall become effective. Provided, that in the interim, in the presence of necessity for prompt action the Council is empowered to act in behalf of the Society.

(h) It shall elect the Councilors upon the nomination of the delegates of a Councilor District whose Councilor term expires.

(i) The House of Delegates shall provide for division of the scientific work of the Society into appropriate sections. It shall prescribe the rules governing the meetings of these sections and the election officers.

(j) It shall present a summary of its proceedings at a General Meeting of the Society and publish its minutes in the Journal.

(k) It shall have the following standing and business committees, appointed by the Speaker:

Committees on—

Council

Officers

Standing Committees of the Society

Miscellaneous Business

Special Committees

(l) No new business shall be introduced in the last session of the House of Delegates without unanimous consent of the delegates except when presented by the Council. All new business so presented shall require three-fourths affirmative vote for adoption.

(m) The election of the officers of the Society by the House of Delegates shall be held at the last session of the House of Delegates at any Annual Meeting. No delegate shall be eligible for election to the general offices of the Society, but may be eligible for election as Speaker or Vice-Speaker of the House. Nominations for any office in the Society shall be made on the floor of the House and shall be limited to two minutes. When the Speaker has declared the nomination for any office closed he shall designate a committee of tellers who shall distribute, count and announce the result of the ballot. In the event of only one nominee the candidate may be elected by a viva voce vote. Members elected to office shall take office at the close of the last session of the Annual Meeting.

(n) All resolutions introduced into the House shall be in duplicate and presented to the Secretary immediately after the delegate has read the same and shall be referred to the proper committee by the Speaker before action thereon is taken.

(o) Robert's Rules of Order when not in conflict with this Constitution and By-Laws shall govern the parliamentary proceedings of the House of Delegates.

CHAPTER 4—DUTIES OF OFFICERS

Section 1. The President shall preside at all General Meetings of the Society, and shall fill all vacancies in offices and committees in consultation with the Council unless otherwise provided for; he shall appoint the members of all committees not otherwise provided for; he shall deliver the President's annual address and shall as far as practicable visit component county societies during his tenure of office; he shall have a voice in the deliberations of the House of Delegates and he shall be an ex-officio member of the Council.

Section 2. The President-Elect shall be a member of the Council ex-officio, and shall act for the President in his absence or disability. If the office of President should become vacant the President-Elect shall succeed to the Presidency in which event the Council shall elect a new President-Elect.

Section 3. The Treasurer shall be the custodian of all the invested funds and the securities of the Society. He shall be elected by the Council and accountable through the Council to the Society. The Council shall cause an annual audit to be made of his accounts.

Section 4. The Secretary shall be the custodian of all the records of the Society, he shall conduct all the official correspondence of the Society at the direction of the House of Delegates, the Council

and the officers of the Society. He shall be the Recording Officer of the House of Delegates, the Council, Scientific Assembly and General Meeting and shall be an ex-officio member of these bodies. He shall also discharge the following duties:

1. Collect the annual membership dues and such other monies as may be due to the Society, keep membership records and issue membership certificates.
2. He shall conduct the correspondence of the Society.
3. He shall make all required reports to the American Medical Association.
4. He shall act as one of the delegates of the Society to the American Medical Association.
5. He shall deposit all funds received in an approved depository and disburse them upon the order of the Council. The Council shall cause an annual audit of his accounts by a certified public accountant. He shall render an annual report to the Council reviewing the Society's activities and imparting recommendations for the advancement of the Society's interest.
6. He shall perform such other duties as the Council may direct. Under the direction of the Council he shall be the Business Manager of the Journal performing all duties concerned with the issuance of that publication.
7. He shall superintend all arrangements for the holding of all meetings in compliance with the Constitution and By-Laws and the instructions of the Council.
8. He shall send out all official notices of meetings, committee appointments, certificates of election to office and special duties of committees.
9. He shall receive and transmit to the House of Delegates and to the Council all committee and officer's annual reports.
10. He shall be elected by the Council and shall be remunerated by a salary, the amount of which shall be fixed by the Council.
11. He shall perform all such other secretarial duties that the interest of the Society demand.

CHAPTER 5—THE COUNCIL

Section 1. The Council is the Executive body of the Society. It shall determine its own time and place of meeting. It shall elect its own Chairman and Vice-Chairman to serve one year. Its annual meeting shall be held coincident with the annual meeting of the Society. It shall appoint an executive body of five of its members who shall meet monthly with the President and the Secretary and such other officers as the business interests of the Society demand.

Section 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year and keep in touch with the activities of the societies constituting his district. He shall make an annual report to the Council imparting the condition of the profession in his district.

Section 3. Collectively the Council shall be the Board of Censors of the Society. It shall consider all questions involving the right and standing of members whether in relation to other members, to component societies, or to this Society. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all cases, including questions regarding membership in this Society, shall be final.

Section 4. It shall make careful inquiry into the condition of the profession in each county in the

state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians in the same locality and shall continue these efforts until every reputable physician of the state has been brought under the Society's influence.

Section 5. It shall upon application provide and issue charters to county societies organized in conformity with this Constitution and By-Laws and revoke such charters when deemed necessary.

Section 6. The Council shall direct and control the publication of the Journal and shall elect the Editor of the Journal.

Section 7. The Council shall approve the expenditure of all the funds of the Society before the same are disbursed.

Section 8. The Council shall appoint the members of the Medico-Legal Committee and supervise the duties and work of that committee.

Section 9. The Council shall provide such headquarters for the Society as may be required to conduct its business properly.

Section 10. The Council shall render an Annual Report to the House of Delegates.

CHAPTER 6—STANDING COMMITTEES

Section 1. The following standing committees shall be appointed by the President by and with the advice of the Council—

- (a) Committee on Legislation
- (b) Committee on Civic and Industrial Relations
- (c) Medico-Legal Committee
- (d) Joint Committee on Public Health Education

Section 2. The Committee on Legislation shall consist of five members appointed by the President each year and with the approval of the Council.

The Committee on Legislation shall utilize every organized influence of the profession for the promoting of such legislation as will be for the best interests of the public's health and that of scientific medicine. It shall work under the direction of the House of Delegates or of the Council when the House of Delegates is not in session. No bill or proposed law or amendment shall be introduced in the state legislature or sent to any member of the legislature in the name of this Society or by any of its committees until such proposed legislation shall have been endorsed and approved by the Council.

It shall submit an annual report with recommendations to the House of Delegates.

Section 3. The Committee on Civic and Industrial Relations shall consist of seven members appointed by the President by and with the advice of the Council.

The duty of this committee is to represent the profession in all conferences that may be held within the boundaries of this state dealing with problems pertaining to civic and industrial medicine and the relation of the profession thereto.

The committee shall undertake in addition to the above activities the study of our civic and industrial problems and concern itself with the profession's interest and endeavor to enhance the relation of the profession to civic and industrial bodies.

Section 4. The Medico-Legal Committee shall consist of an executive board of five to be elected by the Council. Each component society shall elect one representative who shall act for the committee in their respective counties. The Council at its January meeting shall elect one of the five members of the executive board as Chairman and whose term shall be for one year.

The salary of the Chairman of the Medico-Legal committee shall be fixed by the Council annually.

The executive board of the Medico-Legal committee shall report to the Council at its annual meeting giving full particulars of the work of the committee and a detailed statement of income and disbursements.

The funds allotted to the Medico-Legal committee shall be deposited by the Secretary of the State Society in an approved depository and shall be disbursed by him upon the recommendation of the Chairman of the Medico-Legal committee and by and with the approval of the Council.

The Medico-Legal committee shall engage a competent firm of general attorneys and fix their compensation. Their duty shall be to compile from all available sources court decisions fixing the law of liability of physicians for civil malpractice, such compilations shall be the property of the Society. The Medico-Legal Committee will also defend any member of the Society, in good standing, when sued or threatened with suit for civil malpractice and to supervise such defense through proper attorneys. Members in arrears after April first of each year shall not be entitled to defense for any suit, the cause of action which arose while in arrears, and any member sued or threatened before joining the Society shall not be entitled to the services of the Medico-Legal committee.

Members against whom action is brought in court without the boundary of Michigan shall not be entitled to medical legal defense unless the circumstances in each particular case justify the making of such defense and then only after the approval of the Council has been secured.

With the exceptions noted above the Medico-Legal Committee shall undertake the defense of any member of the Society sued or threatened with suit for civil malpractice through all State and Federal courts operating in Michigan, regardless of the time when the alleged cause for action arose and shall also defend any action for civil malpractice against the estate of a deceased member providing he or she while living conformed to the foregoing requirements.

In the event that during any one year the demands upon the Medico-Legal fund be large enough to exhaust it, the Council shall be authorized to loan sufficient funds of the Society to meet the contingency.

It shall be the duty of any member of the Society threatened with action for civil malpractice to confer at once with the member of the Medico-Legal committee from his county society and with his aid to prepare the case and forward the same to the Chairman of the Medico-Legal committee. He must agree not to settle or compromise his case without the consent of the Executive Board and the general attorney. He may recommend the best available local attorney, but he shall not engage the services of any local attorney unless directed by the Chairman of the board and the general attorneys of the committee.

All attorney fees and court costs will be paid from the Medico-Legal fund and the defense carried through all Federal and State courts operating in Michigan, but under no circumstances shall this fund be liable for any damages assessed against a member.

Section 5. The President shall appoint five members who shall constitute the Society's representatives upon the state committee known as the Joint Committee on Public Health Education. The term of one of the members of this committee shall expire each year.

CHAPTER 7—EMERGENCY

Section 1. When prompt speech and action are imperative, authority to speak and act in the name of the Society is invested in the Council.

CHAPTER 8—ANNUAL DUES

Section 1. The annual dues shall be ten dollars

for each member. The Secretary of each County society shall collect and forward the dues to the State Secretary on or before April first of each year.

Section 2. Any member in arrears after April 1st of each official year shall stand suspended until his name is properly recorded and his dues for the current year properly remitted.

Section 3. Any county society which fails to make the reports required at least thirty days before the Annual Meeting of the State Society shall be held suspended and none of its members or delegates shall be permitted to participate in any of the proceedings of the Society or of the House of Delegates.

CHAPTER 9—COUNTY SOCIETIES

Section 1. All county societies now in affiliation with the State Society or those which may hereafter be originated in this state, which have adopted principles of organization not in conflict with this Constitution and By-Laws or with the principles of Medical Ethics of the American Medical Association, will upon application to the Council receive a charter and become a component part of this Society.

Section 2. Only one component county medical society shall be chartered in any county.

Section 3. Each county society shall be the judge of the qualifications of its own members; but, as such Societies are the only portals to this Society and to the American Medical Association, every reputable and legal practitioner of medicine shall be eligible to membership. He shall continue as a member providing he complies with the provisions of the Constitution and By-Laws of his county society and of this Society. In the event that his conduct, actions or professional labors reflect violation of said provisions, and in the event of failure on the part of his county society to exercise disciplinary action upon him, the Council after due notice and hearing, may cause his expulsion.

A member of a component society whose license has been revoked shall be dropped from membership automatically as of the date of revocation.

Section 3. Any physician who may feel aggrieved with the action of his county society in suspending or expelling him from membership shall have the right to appeal to the Councilor of his district and lastly to the Council.

Section 4. In the hearing of appeals the Councilor or the Council may admit oral or written evidence as in their judgment will best and most fairly present facts. The decision of the Council is final and an appeal can only be taken to the Judicial Council of the American Medical Association upon the representation that the appellant was not accorded the opportunity of a fair and just trial.

Efforts at conciliation and compromise shall, however, precede all hearings.

Section 5. A physician living near a county line may hold his membership in that county most convenient for him to attend, on permission of the Councilor or Councilors in whose jurisdiction he resides.

Section 6. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, the moral and material conditions of every physician in the county; systematic effort shall be made by each member and by the county society as a whole to increase the membership until it embraces every eligible physician in the county.

Section 7. At the annual meeting of each county society or at a designated meeting, of which ample notice has been given, each county society shall elect annually delegates or alternate delegates in conformity with the provisions of this Constitution and By-Laws to represent the county society in the House of Delegates of this Society. The Secretary

of the County Society shall immediately send a list of its delegates to the Secretary of the state Society.

Section 8. The Secretary of each county society shall keep a roster of its members, and if practicable a list of nonaffiliated physicians in the county, in which shall be shown the full name, the address, the college and date of graduation, the date of license to practice in this state, and such other information as may be deemed necessary.

Section 9. Each county society shall appoint or elect a committee on Public Legislation and Public Policy, and the County Secretary shall send the name and address of the Chairman to the Secretary of this Society.

CHAPTER 10—AMENDMENTS

Section 1. These By-Laws may be amended by a majority vote of the delegates present, after the proposed amendment is laid on the table for one session. These By-Laws become effective immediately upon adoption.

DELEGATES

(The names of delegates appear in capital letters; alternates in small letters)

Alpena County—16

E. L. FOLEY, Alpena
A. R. Miller, Harrisville

Northern Michigan—23

Antrim, Charlevoix, Emmet, Cheboygan
DON DUFFIE, Central Lake
F. C. Mayne, Cheboygan

Barry County—12

C. P. LATHROP, Hastings
C. S. McIntyre, Hastings

Bay-Arenac-Iosco—62

H. P. LAWRENCE, Bay City
A. D. Allen, Bay City

Berrien County—44

W. C. ELLET, Benton Harbor
L. M. Rutz, Niles

Branch County—11

A. G. HOLBROOK, Coldwater
S. E. Far, Quincy

Calhoun County—114

C. S. GORSLINE, Battle Creek
GEORGE HAFFORD, Albion
W. L. Godfrey, Battle Creek
W. F. Martin, Battle Creek

Cass County—9

W. C. McCUTCHEON, Cassopolis
George W. Green, Dowagiac

Chippewa-Mackinac—15

J. G. BLAINE, Sault Ste. Marie
F. C. Bandy, Sault Ste. Marie

Clinton County—13

W. A. SCOTT, St. Johns
G. H. Frace, St. Johns

Delta County—20

A. S. KITCHEN, Escanaba
W. A. Lemire, Escanaba

Dickinson-Iron—18

Eaton County—19

PHIL H. QUICK, Olivet
Stanley Stealey, Charlotte

Genesee County—127

C. F. MOLL, Flint
J. T. CONNELL, Flint
M. S. KNAPP, Flint

G. J. Curry, Flint
D. D. Knapp, Flint
M. S. Chambers, Flint
Gogebic County—25
W. E. TEW, Bessemer
T. R. Reese, Ironwood
Grand Traverse-Leelanau—25
Gratiot-Isabella-Clare—27
W. E. BARSTOW, St. Louis
F. J. Carney, Alma
Hillsdale County—20
G. R. HANKE, Ransom
O. G. McFarland, North Adams
Houghton-Baraga-Keeweenaw—39
H. M. JOY, Calumet
R. B. Harkness, Houghton
Huron County—8
Ingham County—96
E. J. MCINTYRE, Lansing
L. G. CHRISTIAN, Lansing
O. Brengel, East Lansing
Ionia-Montcalm County—36
I. S. LILLY, Stanton
H. B. Weaver, Greenville
Jackson County—73
J. J. O'MEARA, Jackson
PHILIP RILEY, Jackson
C. S. Clark, Jackson
H. A. Brown, Jackson
Kalamazoo-Van Buren-Allegan—117
F. T. ANDREWS, Kalamazoo
F. C. PENOYER, South Haven
L. H. Stewart, Kalamazoo
J. H. Van Ness, Allegan
Kent County—194
A. V. WENGER, Grand Rapids
G. H. SOUTHWICK, Grand Rapids
R. G. DENHAM, Grand Rapids
W. E. WILSON, Grand Rapids
A. M. Moll, Grand Rapids
L. E. Sevey, Grand Rapids
J. S. Brotherhood, Grand Rapids
W. R. Vis, Grand Rapids
Lapeer County—19
H. B. ZEMMER, Lapeer
D. J. O'Brien, Lapeer
Lenawee County—34
R. G. B. MARSH, Tecumseh
C. H. Westgate, Morenci
Livingston County—12
H. L. SIGLER, Howell
L. A. Davis, Howell
Luce County—9
R. E. SPINKS, Newberry
C. B. Toms, Newberry
Macomb County—38
J. E. CURLETT, Roseville
E. Eveleth, Fraser
Manistee County—13
A. A. McKAY, Manistee
H. D. Robinson, Manistee
Marquette-Alger—34
V. VANDEVENTER, Ishpeming

A. W. Hornbogen, Marquette
Mason County—9
C. M. SPENCER, Scottville
E. W. Switzer, Ludington
Mecosta-Osceola—19
L. E. KELSEY, Lakeview
T. P. Treynor, Big Rapids
Menominee County—12
D. R. LANDSBOROUGH, Daggett
E. Sawbridge, Stephenson
Midland County—8
WILBER D. TOWSLEY, Midland
Joseph H. Sherk, Midland
Monroe County—32
S. J. RUBLEY, Monroe
M. A. Hunter, Monroe
Muskegon County—68
F. W. GARBER, SR., Muskegon
C. J. Bloom, Muskegon
Newaygo County—10
Oakland County—99
C. T. EKLUND, Pontiac
F. A. MERGER, Pontiac
F. A. Baker, Pontiac
N. B. Colvin, Pontiac
Oceana County—8
A. R. HAYTON, Shelby
C. Day, Hart
**Otsego-Montmorency-Crawford-Oscoda-
Roscommon-Ogemaw—11**
C. R. KEYPORT, Grayling
L. A. Harris, Gaylord
Ottawa County—21
R. H. NICHOLS, Holland
S. L. DeWitt, Grand Haven
Ontonagon County—7
F. W. McHUGH, Ontonagon
E. J. Evans, Ontonagon
Saginaw County—68
J. T. SAMPLE, Saginaw
C. E. Toshach, Saginaw
Sanilac County—7
C. G. ROBERTSON, Sandusky
S. M. Tweedie, Sandusky
Schoolcraft County—5
A. C. SCHOCH, Manistique
A. R. Tucker, Manistique
Shiawassee County—27
W. F. WEINKAUF, Corunna
W. E. Ward, Owosso
St. Clair County—38
A. J. MacKENZIE, Port Huron
C. C. Clancy, Port Huron
St. Joseph County—17
CHARLES MORRIS, Three Rivers
Tri-County—18
Wexford, Kalkaska, Missaukee
Tuscola County—23
C. W. CLARK, Caro
N. J. Malloy, Gagetown
Washtenaw County—114
J. A. WESSINGER, Ann Arbor
E. B. KELLOGG, Ypsilanti

M. E. Soller, Ypsilanti
 Fred L. Arner, Ann Arbor

Wayne County—1,354

CHARLES J. BARONE, Detroit
 E. C. BAUMGARTEN, Detroit
 A. P. BIDDLE, Detroit
 A. S. BRUNK, Detroit
 WM. J. CASSIDY, Detroit
 J. L. CHESTER, Detroit
 NORMAN E. CLARKE, Detroit
 BASIL L. CONNELLY, Detroit
 J. D. CURTIS, Detroit
 J. H. DEMPSTER, Detroit
 CHARLES E. DUTCHESS, Detroit
 B. U. ESTABROOK, Detroit
 L. O. GIEB, Detroit
 C. K. HASLEY, Detroit
 L. T. HENDERSON, Detroit
 A. JOSEPH HIMMELHOCH, Detroit
 L. J. HIRSCHMAN, Detroit
 S. W. INSLEY, Detroit
 F. A. KELLY, Detroit
 C. B. LAKOFF, Detroit
 D. J. LEITHAUSER, Detroit
 H. A. LUCE, Detroit
 R. M. McKEAN, Detroit
 R. L. NOVY, Detroit
 C. I. OWEN, Detroit
 G. C. PENBERTHY, Detroit
 W. S. REVENO, Detroit
 J. R. RUPP, Detroit
 W. J. STAPLETON, JR., Detroit
 A. H. WHITAKER, Detroit
 L. Byron Ashley, Detroit
 A. U. Axelson, Detroit
 D. S. Brachman, Detroit
 W. N. Braley, Detroit
 C. L. Candler, Detroit
 H. R. Carstens, Detroit
 J. H. Chance, Detroit
 C. R. Davis, Detroit
 E. C. Davidson, Detroit
 D. P. Foster, Detroit
 L. J. Garipey, Detroit
 H. B. Garner, Detroit
 M. H. Hoffman, Detroit
 Wm. H. Honor, Detroit
 Wm. E. Johnston, Detroit
 H. I. Kallet, Detroit
 C. S. Kennedy, Detroit
 M. O. Kernick, Detroit
 F. J. Kilroy, Detroit
 J. Liburt, Detroit
 J. J. McClintock, Detroit
 J. B. Morin, Detroit
 H. E. Northrup, Detroit
 H. A. Pearse, Detroit
 F. S. Perkin, Detroit
 F. D. Royce, Detroit
 R. L. Schaefer, Detroit
 C. R. Van Grundy, Detroit
 C. C. Vardon, Detroit
 F. C. Witter, Detroit

**ENTERTAINMENT PROGRAM OF
 MICHIGAN STATE MEDICAL
 SOCIETY ANNUAL
 MEETING**

Benton Harbor and St. Joseph

September 15, 16 and 17

For Women

Monday

Morning—Reception of wives of Delegates at Hotel Whitcomb in St. Joseph.

Afternoon—Courtesy rides through Fruit Belt, House of David and along Lake Michigan. Golf for women at Berrien Hills Country Club. Informal bridge tables in Hotel Whitcomb gardens.

Evening—Bridge party, Lobby of Hotel Whitcomb. Dancing in Outdoor Ball Room of Hotel Whitcomb (Regular Whitcomb Dance Program).

Tuesday

1:00—Luncheon and Bridge, Berrien Hills Country Club.

4:45—Excursion Ride on Lake Michigan. Large Goodrich passenger ship.

Evening—Special Show, Liberty Theater, Benton Harbor.

Wednesday

10:30 A. M.—Special Style Showing, courtesy Shepard & Benning, St. Joseph.

11:30 A. M.—Courtesy rides through the Fruit Belt for those missing out on Monday.

Courtesy cars will be provided at all times for the visitors and special privilege placards provided for all cars. Special trips will be arranged for those who wish, and open privileges for golf fans at all hours at the Berrien Hills and Twin City Golf Courses. Information and registration booths will be maintained at the Whitcomb Hotel in St. Joseph and Sonner Hall in Benton Harbor. The bridge prizes will be worth playing for, and the Berrien County women, under the leadership of Mrs. Henry Bartlett of St. Joseph, promise to keep every woman visitor entertained from the time she arrives until departure.

Husbands will not have to worry about their wives' transportation or entertainment once they are registered.

For Men

Monday

Evening—Smoker and luncheon for officers and members of House of Delegates. Hotel Whitcomb.

Tuesday

4:45 P. M.—All who wish may go on the excursion ride on Lake Michigan. A large Goodrich passenger ship will make about an hour's trip out in the lake.

For the golf bugs the Berrien Hills Country Club and the semi-public Twin City Golf Course and Martin Hills Club will be available at all times.

Those who wish amusement will find the Silver Beach Amusement Park a short walk from the Hotel Whitcomb. All the rides, dancing, etc. Visits may also be made to the House of David Amusement Park and the Zoo in Benton Harbor.

Monday, Tuesday and Wednesday there will be Courtesy Cars available in the late afternoon for rides through the Fruit Belt, or you can join the procession with your own car.

The Chambers of Commerce will provide small baskets of Berrien County fruit on Tuesday and Wednesday for souvenir gifts.

Special Privilege placards will be given to all who wish them when they register. Cars provided with these signs will be given extra consideration by the police of the Twin Cities. Garages are available near every hotel and a list will be sent out by the Chambers of Commerce.

Boy Scout guides will be available on Monday and Tuesday.

Physicians who wish to bring their wives can park them with the Ladies Entertainment Committee until ready to leave for home and we will promise you that there will be no excuse on their part if they complain of being left to shift for themselves.

HOTELS—ANNUAL MEETING

Benton Harbor

Hotel Vincent.....\$2.50 single to \$12 double
Hotel Premier\$2.00 single and up
Hotel Michigan 2.00 single and up
Hotel Dwan 2.00 single and up
Hotel Benton 2.00 single and up
Hotel Fastland 1.50 single and up

St. Joseph

Hotel Whitcomb—
\$2.50 single and up to \$12.00 double
Hotel Dennis—
\$2.50 single and up to \$10.00 double
Hotel Lakeview—
\$2.00 single and up to \$8.00 double
Edgewater Beach Hotel—
\$7.00 per day American plan.

Above listed hotels are sufficient to accommodate all of the physicians and their wives who might attend. There are many others not listed because not first class, year around hotels but are available if necessary.

Hotel Whitcomb is to be headquarters in St. Joseph and Hotel Vincent in Benton Harbor.

Reservations may be sent direct to hotels or to the Berrien County Medical Society. A Hotel Committee has been appointed to see that all reservations are taken care of and communications may be addressed to Dr. F. J. Witt at St. Joseph or to the Secretary, Dr. W. C. Ellet of Benton Harbor.

F. C. W.

OUR EXHIBITORS

Members are urged to spend a goodly amount of their time visiting the Commercial and Scientific Exhibits. Representatives of exhibitors will be ready to answer questions and to serve you.

COMMERCIAL EXHIBITS

	Booth
Columbus Pharmacal Co., Columbus, Ohio.....	19
General Electric X-ray Corporation, Chicago, Ill.	10
Gerber Products Division, Fremont, Mich.....	8
Horlicks Malted Milk Corporation, Racine, Wis...	7
The G. A. Ingram Co., Detroit, Mich.....	11 & 12
Kellogg Company, Battle Creek, Mich.....	16
A. Kuhlman & Co., Detroit, Mich.....	23
Laboratory Products Company, Cleveland, Ohio..	22
Medical Protective Company, Chicago, Ill.....	13
Mead Johnson & Company, Evansville, Ind.....	25
The C. V. Mosby Company, St. Louis, Mo.....	17
Petrolagar Laboratories, Chicago, Ill.....	9
Professional Underwriters, Grand Rapids, Mich...	24
W. B. Saunders Company, Philadelphia, Pa.....	20
Bruce Publishing Company, St. Paul, Minn.....	15

Write

For Your

Hotel

Reservation

Today

MEMBERS OF WOMAN'S AUXILIARY

Mrs. Harris, state president, wishes to call your attention to the fourth annual meeting of the Woman's Auxiliary Michigan State Medical Society, to be held at Benton Harbor and St. Joseph, September 14, 15 and 16, 1930.

The program planned is as follows:

Monday evening, September 15—Informal bridge for ladies at Whitcomb Hotel, St. Joseph.

Tuesday morning—Registration of members and delegates. Women's headquarters to be Vincent Hotel, Benton Harbor. All are requested to register. (Each County Auxiliary is entitled to one delegate to each twenty-five members or major fraction thereof.)

Tuesday, twelve noon—Executive Board meeting, Country Club.

Tuesday noon, 12:30—Luncheon for visiting ladies at Country Club, to be followed by business meeting, reports of delegates and annual election of officers.

At this luncheon meeting Mrs. G. Henry Mundt, of Chicago, Ill., will be our speaker. Mrs. Mundt is state organizer for Illinois, as well as director on the national board of the Woman's Auxiliary.

Tuesday, 5:00 P. M.—Boat ride.

Tuesday, 7:00 P. M.—Special music at Liberty Theater.

Wednesday, September 17, there will either be a ride through the surrounding country or a style show at the shops. That will be decided later.

I think the above sounds like an interesting time for the visitors, don't you?

Mrs. Harris has named her nominating committee: Mrs. John C. Smith, Chairman, Jackson; Mrs. C. P. Doyle, Lansing; Mrs.

Joseph Rosenfeld, Battle Creek; Mrs. M. T. Slattery, Bay City.

Mrs. Harris is most desirous of a large attendance, and hopes for a round table discussion of County problems, also to become better acquainted, thereby making Michigan outstanding in the National organization. Please keep September 15, 16 and 17 free to attend this very important meeting and remember the place, Benton Harbor and St. Joseph.

Yours very sincerely,
LOUISE T. URMSTON,
Editor Woman's Page.

At the National meeting held in Detroit in June, Mrs. J. Newton Huntsberger, of Pennsylvania, was chosen president for the coming year, and Mrs. A. B. McGlothlan, of Missouri, to serve the year following. Other officers chosen were: Mrs. Arthur T. McCormack, of Kentucky, recording secretary; Mrs. Fred L. Adair, treasurer, and Mrs. C. L. Reed, of Texas, historian.

Vice presidents elected were: Mrs. Southgate Leigh, of Virginia; Mrs. James Blake, of Minnesota; Mrs. C. W. Garrison, of Arkansas, and Mrs. Joseph F. Percy, of California. Other directors selected are: Mrs. Ephriam Mulford, of New Jersey, and Mrs. Frank W. Cregor, of Indiana.

Chairmen of standing committees are: Hygeia, Mrs. R. N. Herbert, of Tennessee; program, Mrs. E. V. DePew, of Texas; finance, Mrs. Thomas Freeman, of Illinois; legislation, Mrs. Eleanor Whitney, of Michigan; revisions, Mrs. W. Wayne Babcock, of Pennsylvania; public relations, Mrs. A. H. Lippincott, of New Jersey; press, Mrs. John O. McRaynolds, of Texas; printing, Mrs. Edgar S. Buyers, of Pennsylvania; social, Mrs. Walter Freeman, of Pennsylvania.

THE JOURNAL

OF THE

Michigan State Medical Society

PUBLICATION COMMITTEE

J. D. BRUCE, M.D., Chairman.....Ann Arbor
 JULIUS POWERS, M.D.....Saginaw
 B. H. VAN LEUVEN, M.D.....Petoskey

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All communications relative to exchanges, books for review, manuscripts, should be addressed to J. H. Dempster, M.D., 641 David Whitney Bldg., Detroit, Michigan.

Reprints of papers published will be furnished authors at cost if the order is placed at the time the galley proofs are returned to the editor. The cost of illustrations is to be defrayed by the author of the paper whether reprints are ordered or not.

Contributors are responsible for all statements, conclusions and methods in presenting their subjects. Their views may or may not be in agreement with those of the editor. The aim, however, is to allow authors as great latitude as the general policy of The Journal and the demands on its space may permit. The right to reduce in length or to reject any articles is reserved. Articles are accepted for publication on condition that they are contributed solely to this Journal.

All communications regarding advertising and subscriptions should be addressed to F. C. Warnshuis, M.D., 2429 University Avenue, St. Paul, Minnesota, or Suite 1508 Grand Rapids National Bank Bldg., Grand Rapids, Michigan.

SEPTEMBER, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

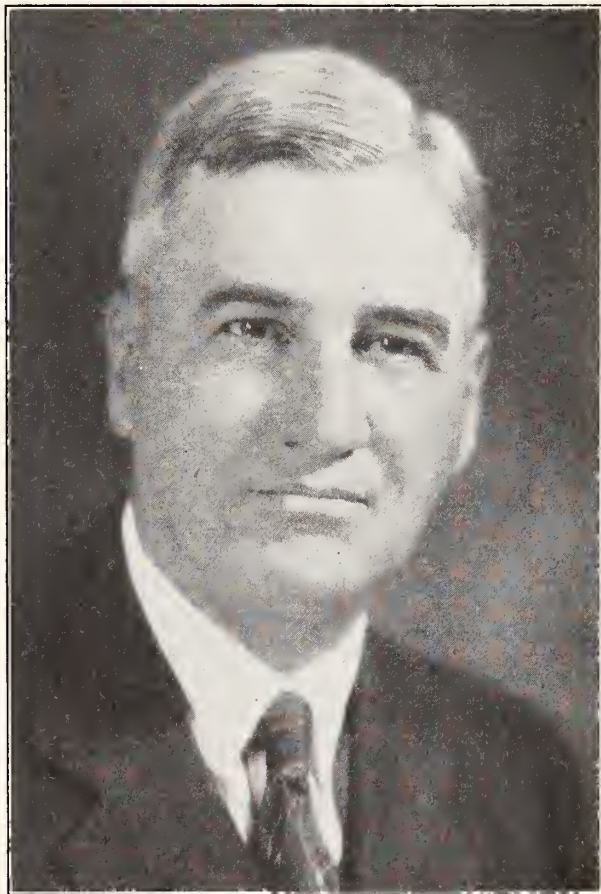
—Francis Bacon.

EDITORIAL

THE ANNUAL MEETING

This is the last number of the Journal preceding the Annual Meeting of the Michigan State Medical Society. If we are to judge by the number and quality of the contributed articles that it has been our pleasure to publish, we are impelled to the happy conclusion that 1929-30 has been one of the most successful years in the history of the Michigan State Medical Society. This number of the Journal contains the program of the 110th annual meeting. There is a veritable post-graduate course in store for those who attend the meeting at Benton Harbor.

While the past has been a successful year and President I. D. Brook and Council are to be congratulated, it is equally true that at no other time in the history of the Society is a united profession more necessary. Our problems in the immediate past have been scientific; the pressing problems of the



J. D. BROOK, M.D.
 President 1929-1930

future will not only be scientific but economic and sociologic as well. There are certain broad movements in progress throughout the nation which affect materially the interests of the medical profession. It is our duty to familiarize ourselves with currents and cross currents of lay opinion that we may be able to act intelligently in the best interest of all concerned.

This is an urgent call for every member of the Society to interest himself in the medical problems of today and to be present at the annual meeting whether he is a delegate or attending in the capacity of a member at large of the Michigan State Medical Society.

PATERNALISM IN MEDICINE

It is hoped that the readers of this Journal either in person heard the President's address by Dr. William G. Morgan of Washington, D. C., before the American Medical Association, or better that each one has read this address in the quietude of his own sanctum as it appeared in full in the Journal of the American Medical Association of June 28th. It is a significant matter that the subjects of presidential addresses of the chief executives of the American Medical Association have dealt with some phase in regard to the social and economic trend of medical practice. Each views with alarm the tendency of medicine away from the doctor as an individual to the doctor as a paid employee, a condition Dr. Morgan defines as paternalism; "Whether exercised by a government, an employer, a group of citizens, a parent or a guardian, the principle involved is the same. It is the principle or practice of the government that undertakes to supply needs or to regulate conduct of the governed in matters affecting them as individuals as well as their relations to the state and to each other on the assumption that it can best determine and secure their highest welfare."

Dr. Morgan goes on to relate the history of the idea from primitive society which was entirely paternalistic, through to the eighteenth century when society became complex, when social equality of individuals began to fade and class distinctions began to manifest themselves. There is a tendency for paternalism to go in waves or in tides as it were. The strong, capable individual wants little interference on the part of the state, except protection in his lawful pursuit of a livelihood. The weakling, however, is relieved of personal responsibility in proportion to the degree of paternalism that prevails. A vigorous thrifty society feels that the less interference the better, hence we have the political doctrine of *laissez faire*. English political philosophers of the eighteenth century taught the doctrine of *laissez faire* which meant individual freedom. European nations have recoiled from this eighteenth century doctrine until now paternalism has assumed a large place in national life. As Dr. Morgan sums it up:

"Finally, however, the *laissez faire* state once more began to exercise an attitude of paternalism, first in matters of aiding industrial or other groups in the prevention of poverty, in the care of the

sick, and by assisting those bereft by death of the source of support. The state, having once more entered the home and looked into the family exchequer, assumed again the paternalistic attitude, until now (at least in certain notable instances with which all are familiar) it says what its citizens shall drink, what they may and may not buy and sell, what they may and may not do on certain days of the week—in short, it has built up such a maze of thou-shalt-not laws governing personal affairs that one wonders, What next?"

Dr. Morgan discusses the matter of compulsory health insurance. Regarding voluntary health insurance on the sick and accident principle, much may be said in its favor; the company assumes the financial risk leaving the patient free to select his own physician. Under the scheme of compulsory health insurance as it obtains in England and in Germany, the patient receives no money as the company guarantees simply to furnish medical aid in the event of illness. The company being the state, the physician supplied is the employee of the state and is under the control of that organization, body and soul. The patient has no choice whatsoever in the matter of selecting his physician. The result has been in both England and Germany dissatisfaction on the part of both physician and patient. A large part of the doctor's time is taken up in purely clerical routine leaving no time for leisure to keep abreast with his professional studies. Dr. Morgan quotes Sir James Barr who characterizes the act in Great Britain as "A long step in the downward path toward socialism. It will tend to destroy individual effort, and increase the spirit of dependency which is ever found in degenerate races. This spoon-fed race will look more and more to a paternal government to feed and clothe it, and not require it to work more than a few hours daily. They will be further encouraged to multiply their breed at the expense of the healthy and intellectual members of the community."

We might add that too much help, for which the person assisted does not give an equivalent, leads to degeneracy and eventually to the survival of the unfit. In spite of the opposition of the British medical profession to state medicine, in 1927 there were reported in England and Scotland and Wales 38,486 physicians so employed by the state. To quote Dr. Morgan:

"The wonder to us is that any member of the medical profession anywhere would become part and parcel of such a scheme. And yet, within our own ranks there are men in high places who are engaged in propaganda to bring about some such system of practice in this country. We have enough

of it already in so-called contract practice, in lumber camps, 'sweatshops,' and various commercial and industrial institutions; do we want the paternalistic hand of the government to reach out and take hold of medical practice in any such fashion as that started by Germany and followed by so many other countries? Do we want any form of state medicine, within the definition laid down by this association?"

The state has, however, a recognized function in the matter of health, namely, preventive medicine and protection from disease under quarantine as well as the hospital care of mental cases which require institutional supervision over long periods. Even people of ample means cannot take care of a member of the family who comes within the category of mental disorder. All cases of illness which do not come in this class should be taken care of by the individual physician and it would seem the best for all concerned if the greatest freedom possible were allowed the patient in the choice of his physician, especially when the state has done its duty to see that none is permitted to practise who has not fulfilled the requirements in regard to medical education as established by the state.

THE COMMERCIAL X-RAY LABORATORY

This is one of the nuisances with which physicians in the larger cities have to contend. These institutions seek a reputation for cut-rate prices on X-ray films. The patient who thinks he needs an X-ray examination goes unreferred to one of these quasi laboratories, gets his X-ray examination (*sic*) and buys the X-ray films which are usually indifferently made, then visits his physician with the visible evidence (?) of his condition in an envelope. The interpretation is presumed to be the work of his doctor, who in turn usually seeks the advice of a roentgenologist to do the plate reading. The last named is also baffled partly on account of the lack of diagnostic quality in the plates, and the fact that a great deal of diagnostic data in many cases are supplied only on fluoroscopic examination. The fluoroscopic examination having no market value to these laboratories is not made nor recorded. Frequently patients come with series of films of the gastrointestinal tract or with radiographs of the chest. It goes without saying that neither examination can be complete without a careful fluoroscopic study. And for this reason

as well as others, the interpretation of films and fluoroscopic findings should be made by the roentgenologist making the examination. Where a technician is employed his work should be directed by the roentgenologist. Patients presumably buy the radiographs in order to save a regular roentgenologist's fee for examination. Both money and materials are worse than wasted since the X-ray examination if indicated requires to be repeated.

It goes without saying that no conscientious doctor ever refers patients to these institutions. The unfortunate patients are the deluded victims of greed and incompetency.

SERUM PIGMENT STUDIES

At the recent Scientific Exhibit in the 81st Annual Convention of the American Medical Association, there was awarded a certificate of merit for original investigation in the field of latent jaundice. Several new and significant phenomena were disclosed by serial clinical observations based on changes in the icterus index, van den Bergh reaction and quantitative bilirubin estimation. Only because these three tests were always used together were such findings possible, and in the correlation of the results the new phenomena were discovered.

The clinical application of the three tests to the following entities gives information of definite diagnostic or prognostic value: cerebral hemorrhage, ruptured ectopic pregnancy, cardiac failure, primary anemias, post-operative liver function, lobar pneumonia, liver cirrhoses, liver metastasis of intra-abdominal carcinoma, familial jaundice, pernicious vomiting of pregnancy, septicemia, sickle cell anemia, hepatitis secondary to cholecystitis, pancreatitis, and duodenal ulcer.

The incidence of latent jaundice following trauma was strikingly shown. The mechanism of colloidal bilirubin crises, at the icterus index 16.6, was well explained, and the fact that the same icterus index is frequently present at the time of death in lobar pneumonia without pleural effusion presents a decided challenge to investigation.

A rational interpretation of the van den Bergh test and its application to the conversion of nascent colloidal bilirubin to the easily excreted crystalloid form by the liver parenchyma, as shown from serial studies,

explains many obscure features heretofore making an understanding of jaundice difficult.

The studies in primary pneumococcal lobar pneumonia have established a standard of normals against which the effectiveness of various therapeutic measures may be determined.

The correlated pigment estimations by *Elton of over 1000 personally made tests have revealed new facts in evaluating these phenomena.

A complete report of this work is anticipated in the near future.

Structural alterations in gross and microscopic sections of liver tissue during pigment retention are interesting studies. The preparation of the tissue with care for minimal loss of liver fluids and maximal color loss is important. Thin gross sections (1-cm. thick) prepared quickly in Kaiserling solutions and transferred to thick white sugar solution within a thin glass cell are suitable for close inspection and correlation with the icterus indices and the microscopic appearances.

The microscopic sections give interesting visible bile pigment displays which can be quantitatively estimated in one, two and three grades. The pigment is usually displayed at and about the central veins. There is however most interesting distributions of the pigment from the periphery of the lobule towards the central vein when the lobular tissue is irregularly damaged. The Kupfer cells of the blood capillaries in a peripheral zone of the lobule hold bile pigment which is being transferred to nearby parenchymal cells and these in turn are seen passing it to the bile capillaries around the central vein. A comparison of the lobule cells where pigment is being transferred, with those without pigment will easily differentiate the non-functioning portions of the lobule.

JAMES E. DAVIS.

LET US NOT FORGET THE ART FOR THE SCIENCE

It has come to be rather customary for doctors—we had almost said of the older generation—who have been practicing for two decades or more to deplore the lack of skill in physical diagnosis which is presumed to characterize the work of many

recent graduates. We do not like to take up the cudgels in behalf of physical diagnosis versus laboratory methods nor of laboratory methods versus physical diagnosis. No subject of a scientific nature can be settled by debate, which, at most emphasizes one phase of the subject to the detriment or suppression of another. Apropos of this subject the Journal of the Indiana State Medical Association makes the following observation.

"At a recent staff meeting where the program consisted of the presentation of interesting cases by the visiting staff, the patients were wheeled into the amphitheater on carts. Not a single clinician demonstrated his methods of making a physical examination in order to arrive at a diagnosis, yet the cases all lent themselves to this method of making a diagnosis. The time was taken up largely by a discussion of x-ray pictures and other laboratory findings. If the same group of cases had been presented in the same institution fifteen years ago by the staff, a careful analysis of all the objective physical findings in the case would have been demonstrated first, and then whatever laboratory data were available would have been presented.

"The reason for this difference in methods of arriving at a diagnosis is understood easily. The age of great clinical teachers of medicine appears to have passed. We do not see them any more about our medical colleges. The men with powers of keen observation and logical reasoning, based upon a wealth of experience at the bedside, and checked by autopsy findings, no longer play the leading roles in the education of medical students. Sleek-haired young men with a rich vocabulary of technical terms and laboratory equations direct the student in his diagnostic efforts. When one attends a clinic conducted by men trained under such methods, he can expect to find the major emphasis laid on laboratory tests, for they have had but little training in methods of physical examination.

"It would of course be folly to underestimate the great value of the laboratories' contribution to scientific medicine. In fact medicine's sole claim to being a science rests upon the laboratory. It is well to remember, however, the effect which the scientific method of training medical students has had and is having on the personal characteristics of the physician. It does not develop men of broad, human sympathies whose approach to the problems of illness is by way of the patient himself rather than a series of chemical reactions or shadows on a sensitized plate. Any medical student who has been denied the inspiration that comes from personal contact with broad-minded clinical teachers of medicine misses the most valuable part of a medical education."

The editor has expressed the situation very clearly. We are sometimes inclined to think that with the development of science as manifest in the extension of laboratory investigation many get into medicine who are not inherently physicians in their mental make-up. A man may be scientifically minded and at the same time very cold and unsympathetic so far as his human contacts are concerned. Life may be to a certain extent a matter of physics and physiological

*Davis and Elton, Exhibit upon Serum Pigmentation Studies, A. M. A. Scientific Exhibit, Detroit, 1930.

chemistry but it is a great deal more. Medicine is an art as well as a science but in this mechanistic age sometimes the art is lost sight of, so largely looms the science. We see here the law of compensation at work. In former times when medicine was much less scientific than today, physical diagnosis was the physician's greatest resource; without it he was helpless. Let us use all our instruments of precision, by all means, the X-rays, the basal metabolism apparatus, the stethoscope, clinical thermometer as well as the various chemical and serological examinations, but let us not forget that the physician has an intuitive sense which can be developed only by long years of careful observation and deduction.

LAPSED MEMBERSHIPS

Approximately four hundred members of the various county societies of this state and consequently of the Michigan State Medical Society have allowed their membership to lapse owing to the non-payment of dues. This is a regrettable circumstance. The cause in the great majority of instances is the financial depression that has settled down not only upon this state but over the whole nation. This editorial is not written in the spirit of censure nor is it a preachment on the subject of one's duty. It is unfortunate, however, that any physician should be compelled for financial reasons to forego his alliance with organized medicine. We know of nothing more important in a professional sense for a professional man, be he physician, lawyer, or engineer, than to maintain his connection with the organization designed to promote the interests of his profession.

If the dues of the county medical society constituted the only obligation of the average physician, there would be little excuse for their non-payment. Many of us who live in cities and the larger towns have become "joiners." Early in our career we began by joining everything in sight that made an appeal such as lodges or clubs of various kinds each with its treasurer whose official hand is extended with each recurring year so that the various dues and fees as they accumulate become more or less a burden. We have known some organizations that have little use for money, to go on collecting annual fees only to lie idly in the treasury. On the other hand

there is an occasional organization which gives a great deal in service to its members with a minimum outlay.

It cannot be gainsaid that the county and state medical societies in point of service have the greatest claim upon their members. Not only is each member kept in touch with the scientific advance of his profession, he is likewise protected in the matter of legal action instigated by dissatisfied patients. The feature of insurance alone is worth the fee charged by the state medical society. The fact of financial stress makes it all the more necessary that the profession continue to be organized for its mutual interest and protection. Probably at no other time in the history of the medical profession of this state is a closer union and therefore understanding so important as at the present time. Our problems are not only scientific but they are economic and social as well. The only way in which the tendency towards state or socialized medicine can be counteracted or overcome is by united front on the part of ourselves. It is to be hoped that all the four hundred approximate will make good ere long, their position in the county and state society.

LIVES OF GREAT MEN OFT REMINDE US

Last month there appeared in the Journal of the Michigan State Medical Society stenographic reports of brief addresses made by a number of past presidents of the American Medical Association. This was part of the program at the complimentary dinner tendered the delegates and officers of the American Medical Association by the Michigan State Medical Society at the Detroit Yacht Club during convention week. The men who spoke at the dinner are, for the most part, of international reputation. They have made good. Each gave what might be called a momentary glimpse into his life, a thumb nail biography. The subject assigned was the event or circumstance that had most influenced the speaker's life. The time was also limited so that each speech was characterized by that brevity which is the soul of wit. We have no doubt that this feature of the Journal has been widely read as it should have been.

Of all forms of literature, biography has the strongest appeal. Nothing is truer than the exclamation of the Latin poet: "Homo

sum; humanum nihil a me alienum puto," which is the reason we all take so enthusiastically to biography. Perhaps the basic cause of our interest in the lives of others is our interest in ourselves. Each one's paramount object in life in the broadest sense, is to adjust himself to his surroundings for successful adjustment is success in life. We therefore seek guidance in the lives of others who have exemplified our ideas of success, or we may also seek to profit from the failures and pitfalls of those who have been less fortunate. Again the charm of biography may consist in the telling. "I have remarked," said Carlyle, "that a true delineation of the smallest man and his scene of pilgrimage through life is capable of interesting the greatest man; each man's life is a strange emblem of every man's and human portraits faithfully drawn are of all pictures the welcomest on human walls."

MORTALITY STATISTICS

"Michigan's Department of Health" has been a feature of this Journal for a number of years. We take it for granted that it is read regularly by everyone who receives the Journal. The present contribution on the mortality of 1929 is of particular interest. On the whole, the total number of deaths for 1929 is 1,362 in excess of the number for 1928. When it is considered, however, that the population of 1929 was greater than that of the previous year the death rate may be considered as practically stationary, namely 11.9 per thousand of population. There will be noted a marked increase of deaths due to epidemic cerebrospinal fever which resulted in 852 deaths. Of the principal causes of death, organic heart disease stands highest with cancer as second. The cases of death from heart disease were almost double from that of cancer. Cerebral hemorrhage occupies third place while the fourth place has been accorded to accidents.

There were recorded for 1929, 4,133 deaths due to accident of which the automobile is charged as being the principal cause, to which are attributed 1,418 deaths. The majority of these might have been prevented had not somebody been in too much of a hurry. The same courtesy on the road that one ordinarily uses in his own drawing room would doubtless have prevented the majority of these fatalities. Important is the number of deaths due to drowning, namely 432. A great many of these also

might have been prevented. Seven and one-half per cent of all deaths in this state have been attributed to accidents. This fact is as much a disgrace to our state as typhoid polluted streams and wells, were they to exist.

Tuberculosis has advanced from sixth to fifth place in the list of deaths for 1929 compared with 1928. However, a perusal of the article on page 000 will be found of more than usual interest.

THE METAMORPHOSIS OF THE DRUGGIST

He used to deal in senna, squills,
Of camphorated oils he spoke;
Or urged the need for liver pills,
Or pellets pink for pallid folk;
Of vastly harsher cures than those
He proved at times the savage master,
And in his rougher moments rose
To chili paste or mustard plaster.

From these his livelihood he drew;
His aid was friendly but severe;
But altered times bring methods new—
And what a graceful change is here!
For less and less do human ills
Provide his daily dose of duty—
As adjutant of frocks and frills
He waxes rich on retail beauty.

The lipstick and the rouge replace
The grimmer drugs he sold of yore,
And many a beauteous female face
Reflects the triumphs of his store;
His is the truly paying line,
His is the final touch and smartest;
His shop should bear the splendid sign—
"Here dwells a decorative artist."

—Manchester Guardian.

Fad diets, modern habits of living, self-prescription and over use of laxative medicines and mineral oils, and infection, either directly or from foci, are among the possible causes suggested to explain the sharp rise in the appendicitis mortality rate during the last nineteen years. In 1928, more than 18,000 deaths in the United States were attributed to this cause alone. Reports issued by the Metropolitan Life Insurance Company, based on records of policyholders, show an increase of 20 per cent in the death rate for white males and a 14 per cent increase for white females during the last five years of this nineteen-year period as compared with the first five years. More men died from appendicitis during the entire period than did women and apparently they are becoming increasingly susceptible to the disease. Among adults of both sexes, older persons are being worse hit as the years go by, though even children under five have not been spared in the advance of appendicitis fatalities. Only the ages from 10 to 19 years have proved an exception to the general rule that appendicitis deaths are increasing in the face of modern science. During the nineteen years there has been immense improvement in surgical technic and focus of interest by the public and physicians on the disease has insured early diagnosis, thereby improving conditions for recovery, but still the fatalities grow.—*Science Service.*

THE EDITOR'S EASY CHAIR

QUACKS AND QUACKERY

The instances of quackery are too numerous and without sufficient inherent individual interest to warrant any detailed treatment of the subject. Quackery has existed in one form or another from time immemorial. The purpose of this article is rather a consideration of the type of mentality that disposes one to exploit the weaknesses of his fellowman and also the type of mental make-up that lends itself to such exploitation. Medicine has perhaps been a more attractive field for pretenders than almost any other calling. The unfortunate sufferer in his despair grasps at straws—anything that promises a cure or relief. Sick minds are unable to judge as to the merits of those who hold themselves out as healers.

The dictionary definition of quack embraces about all that is undesirable in the character of a human being. The Standard dictionary puts him down as a false pretender to cure, an empiric, humbug, charlatan, impostor or mountebank; his opposite is adept, expert, master, regular practitioner. The Oxford dictionary is less verbose, dismissing him as an ignorant pretender to skill, especially in medicine or surgery. It is fair to suppose that these are fair and impartial opinions since lexicographers are in all probability not physicians. So opprobrious is the term among the medical profession that in English law,* and American law† too, to call a medical practitioner a "quack" is actionable per se without proof of special damage. Many of the healing cults might qualify according to the Oxford definition and do come under the category of quackery. It is hard to imagine an adult of sound mind and judgment lending himself to the theory that human ailments all result for instance from maladjustment of vertebrae.

Quackery is said to go back to the beginning of human history. Human nature and credulity have not changed to any appreciable extent so that conditions have always been favorable to mystery-mongering. The healing art was early associated with priestcraft among primitive tribes; the two are associated even at the present time. The same relation may be seen among the more civilized in which healing and religious cults are combined. The control of the mysterious and unknown has been beyond the person of ordinary ability, so we have had a class of "specialists" who have been able to impress themselves on the more gullible by their peculiar ability to deal with the occult and the mysterious. In ancient times these were the priest-magicians or the first quack doctors. Then followed belief in the therapeutic efficacy of various springs, relics and shrines. The early Babylonian priest-physician was wont to sprinkle water over a sick person at the same time repeating an incantation in order to expel the evil spirit presumed to be the cause of the disease. "In ancient Greece, the rhizotomists or root cutters who sold secret remedies, love philtres and cosmetics to the credulous, were well versed in quackery; while in Rome in the time of the Empire, there were quack doctors innumerable."‡

Quackery was probably introduced into Britain during the period of Roman occupation. Among the Arabs the quack doctor was known in the tenth century. Rhazes,§ the noted Arabian physician who gave the world the first accurate description of measles and smallpox, writes concerning the mountebank physician: "There are so many little arts used by mountebanks and pretenders to physic, that an entire treatise would not contain them. Their impudence is equal to their guilt in tormenting persons in their last hours. They profess to cure the falling sickness [epilepsy] by making an issue on the back of the head in the form of a cross. Others give out they can draw snakes out of their patient's noses, or worms from their teeth. No wise man ought to trust his life to their hands."

During the middle ages there was no well defined distinction between the regular practitioner and the pretender. Mondeville, writing about 1306 says, "that unlearned persons, barbers, fortune-tellers, old women give themselves out for surgeons in order to gain a living and that kings, princes, prelates, curates, dukes and others dabble without knowledge in dangerous surgical treatments especially in treatment of diseases of the eye. * * * The vulgar say of these religions and their like, that they have knowledge revealed to them by the pure grace of the creator."

The quack doctor was recognized in London about 1382, when he was designated a "counterfeit physician."

The first attempt at regulating medical and surgical practice (in Anglo Saxon countries at least) with the object of suppressing quackery was in 1511 during the reign of Henry VIII. Seven years later the College of Physicians was founded and given large powers for the suppression of quacks but in spite of this the medical pretender continued to flourish. One Thomas Gale, an army surgeon (1544), states that in St. Thomas' and St. Bartholomew's Hospitals he saw over three hundred poor people suffering from the meddlesome ministrations of ignorant healers.

Montaigne's attitude towards physicians is interesting in connection with our subject. To fix the period the reader is informed that the noted French savant was born in 1533 near the city of Bordeaux and died in the year 1592. He manifested a dislike to the profession and an abhorrence for "physic." "I am of quite contrary humor to other men," said he, "for I always despise it [physic]; but when I am sick, instead of recanting or entering into composition with it, I begin yet more to hate, nauseate, and fear it, telling them who importune me to enter into a course of physic, that they must give me time to recover my strength and health that I may be the better able to support and encounter the violence and danger of the potion." Montaigne's prejudice was against the medicine, so-called, of his day and is important as being the opinion of one whose judgment on all things is the result of the highest wisdom.

The history of quackery has been recorded only within comparatively recent times. In the seventeenth century quackery had flourished to such an alarming degree that a "host of boasting rogues and cunning rascals flocked to London and soon became prominent in the social life of the time." During the eighteenth century quacks were patronized by all classes from the King to the peasant. Then as now the mainspring of their success was advertising. Not only in England but in the United States the eighteenth century appears to have been the golden age of quacks. Quoting from Medical History of

*Encyclopedia Britannica.

†Medical Men and the Law. Page 304. Lea and Febiger, 1913.

‡Quackery by C. J. S. Thompson.

§Loc. cit.

Michigan:* "American medicine abounded in quackery. Like the proverbial indigent, the quack is always with us. The medical pretenders had come to be such a nuisance as well as positive danger to the colonists that early attempts were made to regulate the practice of physic. The first attempt at medical regulation was in New York in 1649, when an attempt was made to put down quackery. The law, however, made no provision for the education of medical men. It was therefore at best negative in its scope. It was followed in 1860 by another law demanding certification of those who would practice the healing art. The penalty for non-compliance was £5. The condition of medical practice in the colonies in the pre-revolutionary period is very graphically told by Dr. Douglas in 1752. In general the physician practicing in our colonies is so perniciously bad that excepting surgery and some very acute cases it is better to let nature under a proper regimen take her course than to trust to the honesty and sagacity of the practitioner. Our American practitioners are so rash and officious that the saying in the apocrypha may be properly applied to them: 'He that sinneth before his Maker let him fall into the hands of the physician.'"

Quackery, though rampant even at the present day, is not so widespread as it was in the days before any restrictive legislation was attempted. It is said that in 1899, the year of the first restrictive medical legislation in Michigan, about 2500 medical pretenders lost their so-called right to practice and this measure did nothing more than to ask that the medical practitioner hold a diploma from a recognized medical college. Restrictive medical legislation, as well as the raising of the standards of medical education, has worked wonders in reducing the number of medical pretenders.

"With no nation-wide regulation over the chartering of educational institutions" according to an editorial in the *Journal of the American Medical Association*,† "various medical healers have opened schools and turned out 'graduates' supposed to care for the sick with qualifications which are a mere pretense as compared with those required of physicians. Through a constant hammering at state legislatures certain laws were enacted for these healers, so that now, in many states, with or without authority and however deficient their qualifications, they pose as physicians and assume the responsibility of caring for the sick and injured. At first these cultists declared that since they 'did not use drugs or practice surgery' they were 'not practicing medicine' and should be 'exempted from the training required of physicians.' Their serious lack of training as compared with that required of physicians amply justifies reference to them as pseudomedical or bogus doctors."

The quack thrives on advertising and promising to cure all, but particularly those diseases pronounced incurable by the regular medical profession. Perhaps in all ages as well as the present day the greatest field for the quack is that of malignant disease. The pretender to ophthalmology has occupied a prominent place near the center of the stage in all ages, some having sought the favor of Kings, who conferred knighthood on them.

In the reign of Queen Anne there were no ophthalmologists so that Anne, who suffered from defective vision, employed one William Reed, who was a poor tailor, but who "having failed as a mender of

garments, set up as a mender of eyes," an illiterate impostor, was knighted by the Queen.

Her Majesty sure was in a surprise,
Or else was very short-sighted,
When a tinker was sworn to look after her eyes,
And the mountebank Reed was knighted.

Another, Chevalier Taylor by name, dubbed by Samuel Johnson as "the most ignorant man that he had ever met," was oculist to George II and among his patients is said to have been Gibbon, the historian of the Decline and Fall of the Roman Empire. Taylor was the prototype of modern advertising quacks.

Strange as it may seem, many literary men‡ were said to have been inclined to quacks. Besides Gibbon, Fielding, Chesterfield, and the French dramatist Moliere patronized charlatans. The French Court under Louis XIV favored mountebank healers. Kings, Queens and prominent people employed quacks and likewise less prominent persons did so because of the example of their superiors.

The metaphysical forms of healing do not appeal to the poor and ignorant; nor, on the other hand, have they any vogue with the well-educated, and with those with a keenly developed critical sense; they find their followers as a rule among the Babbitt class, who might be considered smart rather than clever. Chiropractic is the cult that appeals more to the ignorant. It is an old form of faith cure under a new name. According to Haggerty§ bone-setting has come down from antiquity; its disciples claim that malposition of the bones interfered with the flow of what they called vital forces. Chiropractic descended from the ancient bone adjusters through osteopathy. Formerly the ability to recognize and to correct malposition of bones was considered to be a matter of heredity.

Quacks have been quick to exploit spurious university degrees and other letters after their names which have an awe-inspiring effect on the moronic minded. As already mentioned they revel in the mysterious and are usually the first to proclaim new though bizarre methods of diagnosis and treatment. Electricity, magnetism and even the X-rays have been exploited by them. Their use of technical verbiage would be ludicrous if it were not calculated to entrap the uncritically ignorant who are so prone to be led away by the brazen claims of the charlatan.

Almost anything that arrests popular attention may be made the basis of faith cure. Faith healing may be connected with diet, vitamins, yeast cakes, or fish as brain food. Any curative effect these agents possess is more the effect they have on the mind of the patient than any inherent therapeutic virtue. Faith healing has found but little favor with the medical profession. The time was when placebos filled a role in the physician's armamentarium, but now they are practically never used. The ills of the flesh are treated better today by the medical profession than ever before in spite of the fact that there is a disposition on the part of the profession to neglect those minor conditions which show no manifest pathology.

J. H. Dempster

*Volume I, Chapter IX, *Medical History of Michigan*. Bruce Publishing Co., 1930.

†*Journal A. M. A.*, April 26, 1930.

‡*Devils, Drugs and Doctors*. Haggerty.
§*Loc. cit.*

SOCIETY ACTIVITY

DELEGATES: ATTENTION!

Delegates' credentials have been mailed to County Secretaries who will sign them and present each delegate with his credentials. These credentials are to be presented to the Credentials Committee at 10:00 A. M. Monday, Sept. 15th. Only properly elected delegates or their alternates can be seated. To be represented, County Societies should elect delegates who *will attend*. If a delegate or his alternate fails to attend, no other person can so serve. County officers should ascertain whether their delegates plan to attend; if attendance is doubtful, elect someone else.

OUR GUESTS

As you study the program for our annual meeting in Benton Harbor contained in this issue, please note the group of invited guests. Each will take some part in the program. Each one will contribute to your professional knowledge. They are:

Wilbur E. Post.....	Chicago
Ralph C. Brown.....	Chicago
Louis M. Warfield.....	Milwaukee
Paul A. Magnuson.....	Chicago
Sumner L. Koch.....	Chicago
George W. Crile.....	Cleveland
E. Starr Judd.....	Rochester, Minn.
Irving F. Stein.....	Chicago
David S. Hillis.....	Chicago
Carey Culbertson.....	Chicago
F. H. Falls.....	Chicago
Isaac A. Abt.....	Chicago
Alex F. Hartman.....	St. Louis
Clark W. Finnerud.....	Chicago
Henry G. Poncher.....	Chicago
Harry Gradle.....	Chicago
Samuel Iglaner.....	Cincinnati
Gus W. Dwyer.....	Nashville

Surely you must conclude that you cannot forego hearing these distinguished teachers. Write for your hotel reservations and plan to attend.

GOLF

Those desiring to go to St. Joe and Benton Harbor on Saturday evening, Sept. 13th, are assured of ample opportunity to play golf all day Sunday, Sept. 14th. The local golf courses are in excellent condition presenting an abundance of tough holes for the

"hooker" and "slicer." A Sunday in Berrien County affords one much pleasure. Plan your "foursomes" and "twosomes"—you'll have a great day. The Mayor of St. Joe, Dr. Yeomans, bids you come. He will provide police protection in all arguments as to who won or lost but will not be concerned about 19th hole putts.

LEGAL REQUIREMENTS OF PRACTICE

Act 237, as amended, places upon the Doctor, who has received a license to practice in Michigan, certain obligations.

1st. He must file his license certificate with the county clerk of the county in which he locates. If he moves to another county he must file a certified copy in that county.

There are several hundred Michigan doctors who have not conformed to this provision. *Hence the warning: If you have moved from the county in which you originally commenced practice, be certain that you register with the county clerk in the county where you now reside.* If you fail to do so you are practicing illegally and your signatures on death, insurance or other certificates as well as court testimony is illegal. You are liable to the penalty of the act.

2nd. Your license is subject to revocation for the following violations:

(a) Procuring, aiding or abetting a criminal abortion.

(b) Obtaining a fee on the assurance that an incurable disease can be permanently cured.

(c) The wilfully betraying of a professional secret.

(d) All advertising in which grossly improbable statements are made.

(e) Advertising to treat venereal diseases.

(f) Having professional connection with, or lending one's name to an illegal practitioner of medicine or with one who has been convicted under this act.

(g) Obscene or offensive advertising.

(h) Employing or being employed by any capper, solicitor or drummer for the purpose of securing patients; or subsidizing any hotel or boarding house with a like purpose.

(i) The secret division of fees.

(j) Offenses involving moral turpitude, habitual intemperance, or drug addiction.

(k) Giving or prescribing alcohol for

other than legitimate therapeutic purposes.

(1) Criminal convictions.

During the past six months, seven licenses have been revoked for violations of these provisions. Five doctors are cited to appear before the October meeting of the Board to show cause why their licenses shall not be revoked and three adjourned cases will be concluded at the October meeting.

A license to practice is a privilege granted by the state. That privilege will be continued only so long as the individual complies with the law.

The Michigan law does not permit unlicensed *locum tenens*. Neither does it permit an unlicensed doctor to work with or for a licensed doctor.

Physicians, without a Michigan license, are violating the law if they pursue a practice while residing at a Michigan resort.

These provisions are called to the profession's attention for their guidance. County Societies will perform a service if they will call their members' attention to these provisions. The State Board of Registration will answer any questions and are ready to investigate any complaints.

EXECUTIVE COMMITTEE OF THE COUNCIL

Minutes of the August Meeting

The monthly meeting of the Executive Committee of the Council was held in Grand Rapids on August 8, 1930.

Present: R. C. Stone, chairman; B. R. Corbus; Henry Cook; George Le Fevre; President J. D. Brook; Secretary F. C. Warnshuis.

1. Dr. A. D. La Ferte of Detroit and Dr. J. T. Hodgen of Grand Rapids, representing the Orthopedic Society of the State and the Orthopedic staff of the Michigan Crippled Children's Commission, appeared before the Executive Committee and presented certain facts and differences that were being encountered in the professional work connected with the Michigan Crippled Children's Commission. The request was made that the Council undertake to solve the points at issue. On motion of Corbus-Cook a committee of five, appointed by the Chairman, was directed to arrange a conference with the Michigan Crippled Children's Commission and to endeavor to arrive at a mutually agreeable policy that was to be observed in the supervision and institution of professional services of the orthopedist and in the conducting of local clinics.

The motion carried and the Chairman appointed Dr. J. B. Jackson, Kalamazoo, chairman; J. G. R. Manwaring, Flint; George Le Fevre, Muskegon; A. D. La Ferte, Detroit; Frederick C. Kidner, Detroit, to serve on such a committee.

2. The Secretary presented plans, arrangements and program for the Annual Meeting in Benton Harbor. These were discussed and approved, and the Secretary instructed to carry out their details. The Secretary was also instructed to arrange for the meeting of the Council at six o'clock on Sunday, September 14, and also for a session of the Council at six o'clock on September 16.

3. The Secretary presented the draft for the revision of the Constitution and By-Laws. This was read, discussed and certain recommendations made that the Secretary was instructed to present to the Chairman of the Committee, and the House of Delegates at the time that the Constitution and By-Laws is being considered by the House of Delegates.

4. The Secretary presented preliminary draft of the Annual Report of the Council to the House of Delegates. This was read and discussed and the Secretary instructed to prepare sufficient number of copies to be sent to each Councilor and that the final consideration of the Annual Report of the Council be given at the time of the Council's meeting on September 14.

There being no further business the Executive Committee adjourned at 10:30 P. M.

F. C. WARNSHUIS,
Secretary.

DOCTORS AND SPECIALISTS

Such is the title of a new book, price one dollar, that Morris Fishbein tossed out to the profession and the public during the past month. It deals with the foibles and fancies of the present classification of medical specialists. By word picture, with frequent interspersing of humor, sarcasm and anecdote, these prototypes undergo exposure. The author's presentation provides one with several hours of pleasing entertainment that is equal if not exceeding the enjoyment one obtains from viewing offerings of the movies.

Now is the time to order a dozen or two copies to be given out to your friends at Christmas time. They will thank you and so will the author.

GENERAL NEWS AND ANNOUNCEMENTS

Dr. Ray Connor of Detroit has left for a vacation in Europe.

Dr. Emil D. Rothman of Detroit was operated upon for appendicitis August 3rd, 1930.

Dr. and Mrs. H. Wellington Yates have returned from a two months' sojourn on the continent of Europe.

Dr. Charles E. Dutchess of Detroit who was operated on early in July for appendicitis has resumed his practice.

Members are urged to write for their hotel reservations for the annual meeting. Accommodations are available, but should be reserved.

The police of Detroit raided the Michigan Research Clinic, an alleged cancer cure outfit. A Dr. George was arrested for violation of the medical practice act.

The County Prosecutor issued a warrant for Dr. G. W. Hilton and raided the so-called Toneal Health Station of Grand Rapids. Violation of the medical practice act is alleged.

Dr. Angus McLean, Dr. P. C. McEwen and Dr. Walter J. Wilson were among those who attended the British Medical Association at the annual meeting held in Winnipeg in August.

Dr. Samuel S. Altshuler has located in Detroit at 541 David Whitney Building. Dr. Altshuler was formerly instructor in the Department of Internal Medicine at the University of Michigan.

It is hoped that the second volume of our Medical History will be off the press in September. If you have not ordered your copy, now is the time to send in your order to the State Secretary.

Dr. Bertrand Friedlander has returned from Ft. Snelling, Minn., after two weeks' service with the United States Army. Dr. Friedlander's capacity was that of operating surgeon of No. 73 Evacuation Hospital, with the rank of Major.

Surgeon General Hugh S. Cumming, U. S. Public Health Service, delivered two lectures at the University Health Institute, Ann Arbor, August 1 and 2. The General was the guest of Dr. F. C. Warnshuis, over the week-end, in Detroit.

Dr. Max Pinner, who has been pathologist of the Board of Health at the Northville Sanitarium, has left to conduct research in tuberculosis in Tucson, Arizona. He will be succeeded by Dr. H. S. Willis, who comes to Detroit in September as pathologist of the Board of Health. Dr. Willis is a graduate of the University of North Carolina and also Johns Hopkins where he was subsequently instructor in medicine.

The First Annual Golfing Tournament of the Wayne County Medical Society will be held at the

Thorncliffe Country Club near Detroit on Wednesday, September 10. An afternoon round of golf with dinner in the evening, good-fellowship and distribution of prizes will be the order of the day. All members of the Wayne County Medical Society in good standing are eligible to compete. Those doctors who do not play golf are also invited to attend the banquet and entertainment in the evening.

LICENSES REVOKED

The Michigan State Board of Registration in Medicine, on August 11, revoked the following licenses:

Dr. J. J. George, Detroit, for association with an alleged cancer cure outfit owned by a layman.

Dr. G. W. Hilton, Grand Rapids, for association with the "Toneal Health Station," an advertising outfit owned by a layman.

Dr. Geo. F. Fritz, Detroit, serving a prison sentence for manslaughter following an abortion.

One doctor cited for revocation secured a postponement because of the appeal of his court conviction to the Supreme Court.

A CANCER CURE CLINIC

The Michigan State Board of Registration in Medicine, received a complaint regarding a certain "Michigan Research Clinic" located in the Fort Wayne Hotel, Detroit. A "stool" was sent and on being admitted to the Consultation Room he stated that he had a pain in his left side. With a mere superficial palpation he was advised that he had a cancer and that he should receive immediate treatment. The price was \$75.00 per week and \$3.00 per day for room.

Upon this information a warrant was secured for a certain Dr. J. R. George for violation of the provisions of Act 237 and the place was raided. During the raid, two patients were interviewed, and were found to have come from Grand Rapids, having been sent by the agent of a New Jersey Life Insurance Company.

On further investigation it was found that the financial backer of this so-called "Research Clinic" was the State Agent for this same Insurance Company. This fact has been reported to the State Insurance Commissioner and also to the Director of Agencies of the Insurance company concerned.

These brief facts indicate a new "racket" in which insurance agents from their contact with their policy holders learn of physical impairment and then refer them to these questionable clinics.

As far as being a Research Clinic, the claim was most untrue. There were no facilities for research work, nor was any attempted. The patient's claim or diagnosis was accepted, immediate treatment was advised and the attempt was made to "get the money."

Dr. J. R. George, is out on bail and is cited to appear before the Board for revocation of his license. The doctor is a recent graduate, having just completed his internship and received his license to practice in December, 1929.

THANK YOU

"More than 5,000 representative physicians from all parts of the United States and many foreign countries were present at the A. M. A. annual meeting. Detroit, with ample hotel facilities at very reasonable rates; many moderate priced eating places; ample and fair taxicab service; the largest

Masonic Temple in the world in which was housed all the sections, scientific and commercial exhibits and everything to make a perfect meeting place, and, last but not least, a most hospitable local profession; all of these made the eighty-first session one of the most successful in the entire history of organized medicine in the United States."—Journal Medical Association of Georgia.

PORT HURON TO HAVE A NEW HOSPITAL

Fifty-one years ago, Mrs. Alida Mills, the wife of Dr. H. R. Mills, for many years a successful practitioner in Port Huron, conceived the idea of the need for a hospital for her home city.

She enlisted a few friends and interested them in the matter. Their efforts were rewarded and a short time thereafter, they opened an eight-bed hospital, in old White Park.

Fifty-one years ago, Dr. Theodore Heavenrich, Councilor for the Seventh District, started his school career at the old Miami Ave. school in Detroit, which was situated where the present Board of Education offices are located. His first teacher and the principal of the school was Miss Frances E. Riggs, a sister of Mrs. Alida Mills, and who is still living and active in the city of Detroit.

Evidently fate ordained, through this coincidence, that the doctor should become interested in the Port Huron Hospital, for when he located in Port Huron, thirty years ago, he immediately became associated with the hospital. He was elected to the Board of Trustees and made Medical Director, which position he held for over a quarter century.

He made known to the community the need of a larger and better hospital, and the community responded. In 1904, a thirty-five bed building was completed. Since that time additions have been added, increasing its capacity to fifty-five beds. This is now inadequate and many times patients have had to be turned away.

Through the efforts of Dr. C. C. Clancy, President of the Board of Trustees and former president of the State Medical Society, a meeting was held, attended by leading citizens and many of the doctors.

At this meeting a general discussion was held, and it was decided to put on a campaign for \$300,000 for the erection of a new building. After many consultations, it was decided to hire the firm of Wells, Ward and Dreschman, of New York City, to conduct the campaign.

The first effort was made in June and on July 21, at a public dinner attended by over two hundred men and women who had worked in this campaign, the final result was announced; \$340,000 had been raised, with more to come and Port Huron will soon have a modern one hundred bed hospital.

At this meeting Dr. Heavenrich announced an endowment fund of over \$150,000, which he stated was to be left by a local man and wife by their will. Further, that he had other bequests in view. This will provide for both maintenance and free beds, so that the burden of cost of illness will be lifted from many unfortunates.

So, the seed implanted fifty-one years ago, by that noble woman, Mrs. Alida Mills, will come to full fruition, and our citizens will be the happier and healthier for that ideal of a half century ago.

Much of the success of the campaign is due to the untiring efforts of Dr. Charles Clancy, who has labored unceasingly for the successful issue, and he, together with all the other members of the medical profession, feel grateful to the citizens who have met this need and given the doctors something of which to be proud.

COMMUNICATIONS

SOME IDEAS ON THE MODIFICATION OF OUR LIQUOR LAWS

Editor, Journal Michigan State Medical Society: It is a self-evident fact to people of this great commonwealth that the operation of the Volstead Act has been a failure. Demonstration of this is before us daily in the increasing crime wave, in conditions that have arisen from the operations of the bootlegger, hijacker and the blindpig. It is evident that the government is expending millions of dollars in an effort to control liquor traffic, which is uncontrollable under the present system. Public opinion shows a widespread disrespect for law. Because of the sad and frequent effects of extremely bad liquor and the lack of the regulation of the Volstead Act, it seems imperative that some modification of this great American error should be forthcoming speedily.

The following remedy is submitted for careful consideration:

First: The history of the world shows that all nations have demanded and required some sort of alcoholic stimulation or some substitute has been operating in the food or drink of the people of the world for centuries. A nation is seriously influenced by the selection of its food and drink. If we modify the Volstead Act to conform with the requirements of the nations of the earth we would allow under a carefully regulated system with federal control the use of wine and beer under a definite set of regulations, and the use of hard liquor, whiskey, brandy and gin, under the regulation of another variety of rules and regulations.

The plan I would advocate is the plan of appeal to individual responsibility, to the improvement and continued health of the individual, and to the privilege of liberty which the Constitution of the United States intended to give us for the dispensing of these materials in a sane, orderly, well regulated manner by law, and under federal control.

In order to obtain beer and wine, the individual must first become a voter and have the full rights of citizenship. Second, he must present a certificate that he has voted at the last local, state or government election. Third, that he must have a knowledge of the reading and writing of English, and able to legibly sign his own name. Fourth, he must present a medical certificate from a registered physician in good standing, who will certify that he is suffering from no physical defect or disease which contraindicates the use of alcohol. Fifth, the government would issue to him an individual license similar to an automobile license, for which he would pay the government five dollars per year; this license would be non-transferable, held on good behavior only, and immediately withdrawn if he did not comply strictly with the spirit and letter of the laws to which he must agree when the license is issued. Sixth, no beer or wine may be issued to an individual unless his signature in triplicate complies with the original signature and photograph on the license. Means of identification would be similar to that for soldiers who were passing the lines during the World War. The United States would establish under the Treasury Department, stations at properly selected places (much as oil stations are now placed throughout the various states), and that during definite hours one bottle of beer, one-half pint of wine of definite alcoholic strength may be issued to the individual at cost price in the same manner as a money order

or a postage stamp; the government would appoint a corps of dispensing officers who would be given complete charge of the buying and distribution of all alcoholic products in a manner similar to that carried on by the Quartermaster Department of the Army at the present time. All beer and wine sold to the individual would be stamped with the proper label of purity, alcoholic contents and the examination of the chemical laboratory would be open for examination at any time. This corps of dispensers would consist of one man who would have the rank of colonel, one lieutenant-colonel, and as many majors of divisions as might be necessary, together with the various ranking lieutenants, sergeants, corporals, or their equivalents, and a goodly supply of privates, all under the Civil Service Commission directly under the Treasury Department. If for any reason the question of the physical condition of the individual to take the prescribed amount of alcohol should be in dispute, appeal may be made to medical men of the federal service, who shall constitute a board of three to examine and determine this question.

The certificate for physical examination would refer particularly to those who might in any way be harmed by the use of alcohol. The license to buy alcohol would be revoked by order at any time.

The use of the license may be revoked, also, when one is arrested and convicted of any penitentiary offense. The license may be revoked for intoxication, transfer, or misuse of this certificate; the sale of spirituous liquor, beer or wine or any other alcoholic ingredient shall be a sufficient reason to revoke the license. The sale and manufacture of all alcoholic ingredients containing more than one-half of one per cent of alcohol shall be absolutely in the control of the government of the United States.

BURT R. SHURLY, M.D.

62 Adams Avenue, West,
Detroit, Michigan.

DEATHS

DR. WILLIAM A. HARPER

Dr. William A. Harper died at his home in Detroit July 9 of heart disease. Dr. Harper was born at Deerfield, Michigan, in 1867. He attended the Michigan College of Medicine and Surgery, from which institution he graduated in 1899. Subsequent to graduation he located at Henderson, Michigan, where he practiced for six years, at the expiration of which time he came to Detroit, where he had been engaged in the practice of medicine up to his death. He was for a number of years connected with the staff of Providence Hospital. He is survived by his widow, one daughter, and one sister.

DR. HIRAM BYRD

Dr. Hiram Byrd of Detroit died Sunday, July 20, of angina pectoris, at the age of fifty-five. Dr. Byrd had lived in Detroit only a year, where he was connected with the Jefferson Clinic as head of the department of clinical research. During his connection with the Jefferson Clinic, Dr. Byrd endeared himself not only to his associates but was fast gaining a favorable acquaintance in the local profession. He was educated at the University of Georgia Medical School, where he obtained his M.D. degree in 1902. Dr. Byrd was Director of the Department of Hygiene, University of Mississippi, 1919-1920. He was also Director of the Department of Hygiene, University of Alabama, 1920-1922. In 1915 he made a device for fighting citrus canker,

which was adopted by the United States government. Dr. Byrd, whose specialty was eye, ear, nose and throat, was interested in what is termed the sphenopalatine physiology, having made two contributions to this Journal, the last of which, appearing in the August number, was posthumous. He left one son, Wilbur, aged twenty-five years, his wife having died about six years ago.

DR. CHARLES J. FOLEY

Dr. Charles J. Foley, 42 years old, of 1343 Buckingham road, Grosse Pointe, was drowned while fishing in Tobin's Lake, about ten miles north of Ann Arbor, Sunday, June 29, 1930.

Washtenaw county officers reported the accident occurred when Dr. Foley threw over an anchor, the rope entangling his legs and catapulting him into the water. Dr. Foley had been spending the day with S. A. Nagy, 2688 Northwestern Avenue, who owns a cottage at the lake.

Dr. Foley had practiced medicine in Detroit the last 15 years and was a member of the staff of St. Joseph Mercy hospital. He was graduated from the Detroit College of Medicine and Surgery and served during the war with the medical corps of the American Expeditionary force. He was a member of the Knights of Columbus.

He is survived by his widow, Mrs. Hazel Ehrman Foley; two daughters, Margaret and Jeanne; a son, John; his mother, four sisters and two brothers.

—Bulletin of the Wayne County Medical Society.

DR. EUGENE HART

Dr. Eugene Hart of St. Johns, Michigan, died July 26th after an illness of about two years. Dr. Hart came to St. Johns from Eureka and with his brother Dr. A. O. Hart established a medical clinic which was the first organized in Clinton County. He was also largely instrumental in the building and equipping of the St. Johns Hospital. Dr. Hart was born at Simcoe, Ontario, April 24, 1872. With his parents, Dr. Hamlet and Cerena Hart, he moved to Ann Arbor in 1877, and in 1878 the family moved to Eureka, where his father engaged in the practice of medicine. The son received his early education at the high school of St. Johns and the college of Keokuk, Iowa, and his professional education at the Michigan College of Medicine at Detroit, where obtained the M.D. degree in 1894. He also took post-graduate courses at Harvard and Chicago. For several years Dr. Hart was President of the Clinton County Medical Society and a member of the governing board for Michigan of the Gorgas Memorial Institute. He was also a member of St. Johns lodge No. 105, F. & A. M.

DR. WILLIAM H. ROGERS

Dr. William H. Rogers died on Monday, Aug. 17th, at his home, 3636 Courville Road, Detroit. Dr. Rogers was born at Binghamton, N. Y., sixty-three years ago. He attended the Hahnemann Medical College of Philadelphia where he graduated M.D. He served his internship at St. Luke's Hospital, New York City. Dr. Rogers practiced at 9946 Mack Ave. He was prominent in Masonic circles, being a member of King Cyrus chapter of Acacia Lodge, Michigan Sovereign consistory, Damascus commandery and Moslem Shrine. Dr. Rogers was a member of the Michigan Homeopathic Society and Wayne County Medical Society. His widow and one daughter survive him.

DR. R. C. FAIR

Dr. R. C. Fair of Durand, Michigan, died at his home on August 10th after a long illness of heart disease. Dr. Fair graduated from the University of Michigan with the medical class of 1890. He had practised in Durand since his graduation.

THE DOCTOR'S LIBRARY

SURGICAL DIAGNOSIS, Three Volumes with separate index volume, completing the new work by 42 American authors. Edited by Evarts Ambrose Graham, M.D., Professor of Surgery, Washington University Medical School. Three Octavo volumes, totalling 2,750 pages, containing 1,250 illustrations, and Separate Index Volume. Philadelphia and London; W. B. Saunders Company, 1930. Cloth, \$35.00 a set.

We have come to expect a high standard of excellence in any undertaking of Evarts Graham and in this new work on Surgical Diagnosis we are not disappointed in our expectations. His collaborators, over 40 in number, are largely the younger group of American surgeons, the character of whose work here augurs well for the future of surgery in this country.

All aspects of general surgery, both fundamental and special, are dealt with in monographic manner in chapters written by different men. The surgical specialties such as gynecology, genito-urinary surgery, neurological surgery and orthopedics are well presented in a manner especially valuable to the reader interested in the whole field of surgical diagnosis, who finds the special books on these subjects unduly complicated. The chapters vary somewhat in worth and interest, as is natural when a variety of subjects is covered by many authors, but all are readable, many attaining brilliancy of presentation. A valuable feature of most chapters is the remarkably full bibliography that is appended or interspersed for the reader who desires to master that particular subject. No attempt is made to touch on treatment, which makes such chapters as those on "Infections of the Hand" by Koch and Knavel, and "Fractures and Dislocations" by Key suffer greatly in interest and value because of the complete disassociation from any discussion of treatment. Most chapters are adequately and well illustrated although a few subjects that might be clarified by illustrations are entirely without this aid to the visual minded. The entire work is enlivened and given an intimate note by pertinent and critical comments by the editor.

Volume I, dealing mainly with the fundamentals of surgery, is the least interesting, due largely to the character of the subject matter. The chapter on "Post-Operative Complications" by Cutler and Scott is especially worthy of notice because of their handling of the recent advances of knowledge in this field.

Volume II maintains a uniform standard of excellence in discussion of abdominal lesions, gynecology and lesions of the face, neck, thyroid and skin.

Volume III covers lesions of the thorax, biliary tract, brain and nervous system and the genito-urinary tract in a very satisfactory way. Especially noteworthy is the masterly survey of "Diseases of the Biliary Tract" by the Editor, who has added so much to the knowledge of the diagnosis of disorders of this system.

The entire work impresses one as being thoroughly up to date, free from padding, temperate in tone, written with a view of being understood by those not specialists in any particular field. There can be no doubt of its value to any one interested in the diagnosis of all lesions whose treatment is surgical in nature. It should be of great value to the general practitioner and diagnostician as well as to the surgeon, especially the young surgeon whose difficulties often are in the field covered by this work. For the medical student, the subjects are taken up in too detailed a manner to allow comprehension

in the time allotted in a crowded curriculum. Unquestionably the work was written for the surgeon and will prove of greatest value to the apprentice in this art. It can be heartily recommended to everyone interested in an up-to-date summary of the knowledge of diseases falling in the field of surgery.

—F. A. C.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1929.—With Comments that have appeared in THE JOURNAL. Cloth, price \$1. Pp. 81. Chicago: American Medical Association, 1930.

This is the volume in which the Council annually collects the reports on articles found unacceptable during the year. This edition contains also several interesting preliminary reports on preparations which show promise but for which the evidence is not yet sufficient to justify acceptance by the Council. Reports are given on the following products rejected by the Council: Anayodin, claimed to be iodoxy-quinolinol sulphonic acid (chiniofon) but marketed under a noninforming name without adequate statement of composition and with unwarranted therapeutic claims; Antiustio, an unscientific mixture marketed under a nondescriptive name with unwarranted therapeutic claims; Kerasol and Keraphen, unoriginal products marketed under non-informing names; Sodiphene, an unoriginal alkaline phenol preparation marketed under a proprietary name with unwarranted therapeutic claims; Borocaine, procaine borate under a proprietary name; Quicamphol (Transpulmin), a quinine preparation for intramuscular injection in the treatment of lobar pneumonia; Toxogon, a preparation of inadequately declared composition marketed under a therapeutically suggestive name; Intramuscular Iron Arsenic Comp. (No. 201) and (Intravenous) Iron Cacod. and Glycerophosphate (No. 202), two irrational and unscientific mixtures exploited with emphasis on the numbers. Other rejected products are: Ovoferriin, Tamerici Salts, Elixir Kacyan-McNeil, and Tablets Kacyan-McNeil. An authoritative article on serum disease and serum accidents by MacKenzie and Hanger is of considerable interest and timely importance.

NEW AND NON-OFFICIAL REMEDIES, 1930.—Cloth, price \$1.50. Pp. 481; xlviii. Chicago: American Medical Association, 1930.

The present edition contains all of the features that have in the past made New and Non-official Remedies such a reliable and efficient guide to the physician who wishes to inform himself on the newer medicinal preparations: logical classification of preparations, with authoritative articles on each class; complete and carefully written descriptions of preparations; elaborate indices; and a useful cumulative list of references to the literature on articles not accepted by the Council. Among the more important revisions that appear in this edition are those of the general articles, Barbitol and Barbitol Compounds, Digestive Enzymes, Cod Liver Oil and Cod Liver Oil Preparations, Ovary, Pituitary Gland, Radium and Radium Salts, and Serums and Vaccines. Among the new preparations, descriptions of which appear for the first time in this edition, are: Bismarsen, which is sulpharsphenamine bismuth; Dial-Ciba, which is diacetylbarbituric acid; Calcium Gluconate-Sandoz, a more palatable and less irritating preparation of calcium; Atoquinol-Ciba, a cinchophen derivative; Pitocin and Pitressin, solutions respectively of the oxytocic and pressor principles of the pituitary gland; Viosterol (the Council name for

irradiated ergosterol) in the forms of Viosterol in Oil 100 D, which is irradiated ergosterol dissolved in vegetable oil, and Cod Liver Oil with Viosterol 5 D, which is cod liver oil with its Vitamin D potency enhanced by addition of viosterol. While these new preparations (with the possible exception of Viosterol) do not constitute major additions to the physician's armamentarium, each one gives promise of relative usefulness, and the physician who desires to keep abreast with the progress of therapeutics will familiarize himself with them as well as with the many other new preparations described in this valuable book.

PHYSICAL DIAGNOSIS—Richard C. Cabot, M.D., Professor of Clinical Medicine in Harvard University, formerly Chief of the West Medical Service at the Massachusetts General Hospital. Tenth edition, revised and enlarged, with six plates and 279 figures in the text. Price, \$5.00. William Wood and Company, New York.

This work is a goodly sized monograph which has grown out of the author's experiences. Dr. Cabot has not only a nationwide reputation as one of the leading internists of the United States, but he also possesses the happy faculty of being able to express himself with clarity and force. This work deals with diagnostic methods exclusive of those requiring a certain amount of technical skill such as cystoscopy, ophthalmoscopy and laryngoscopy. The fact that a work has passed through nine editions bespeaks its popularity with the profession. The more important new matter in the present tenth edition is concerned with coronary disease, electrocardiography, cancer of the lung, cardiac asthma, toxic hepatitis, encephalitis lethargica.

DOCTOR AND PATIENT—Papers on the Relationship of the Physician to Men and Institutions. By Francis Weld Peabody, M.D., Professor of Medicine, Harvard Medical School; Director of the Thorndike Memorial Laboratory; Visiting Physician and Chief of the Fourth Medical Service, Boston City Hospital, 1921 to 1927. The Macmillan Company, New York, 1930. Price, \$1.50.

This little work consists of four papers by the late Dr. Peabody, the titles of which are: The Public and the General Practitioner, The Care of the Patient, The Physician and the Laboratory, and The Soul of the Clinic. These papers from the pen of a master will be found an interesting contribution to an ever interesting subject, namely, the relations of the doctor to his patient.

SLIT-LAMP MICROSCOPY OF THE LIVING EYE, EARLY DIAGNOSIS AND SYMPTOMATOLOGY OF AFFECTIONS OF THE ANTERIOR SEGMENT OF THE EYE—Dr. F. Ed. Koby, late First Assistant of the Ophthalmic Clinic, Corresponding Member of the Ophthalmological Society of Paris. Translated by Charles Goulden, O.B.E., F.R.C.S., Surgeon of the Royal London Ophthalmic (Moorfields) Hospital, and Clara Lomas Harris, M. D., Chief Clinical Assistant, Royal London Ophthalmic (Moorfields) Hospital. Second Edition, with 104 illustrations. P. Blackiston's Son & Company, Inc., 1012 Walnut Street, Philadelphia, Pa., Price, \$4.50 net. 1930.

With the increasing clinical advantages being recognized in the use of the slit-lamp, any new treatise bearing on the subject which may give new light in technic or comprehension of findings, is most welcome.

The author in this case has presented the subject in a clear and concise way. It is easily readable, the illustrations are good; while not as complete in some respects as Vogt's Classic Treatise, still reflects the author's comprehension of that work in a way to bring out the salient points in an understandable way, besides adding some things not taken up in the older work.

This is a valuable treatise for beginners or others.

OF GENERAL MEDICAL AND SURGICAL INTEREST

FOODS AND DIETS IN DIABETES

Nellis B. Foster, New York, says it is always advisable and in severe cases absolutely essential to train the patient to use scales in measuring his diet. If this is done from the start, much trouble and misunderstanding can be avoided. Diabetes is one disease in which mathematical precision is possible. Patients soon learn its value to them and the majority are gladly coöperative; they learn at the same time that success depends on them. First of all one should see that they are well taught, so that they understand how to use food charts, are able to make up food formulas, and can change the formula if exigency arises. Every diabetic patient must understand his diet and how to test the urine for dextrose and diacetic acid. To determine the adequacy of the diet prescribed, the patient should be allowed to continue his usual mode of life, with careful observation of his weight and of whether his strength is sufficient for his duties. This observation indicates whether the amount of food is adequate. If it is not, then it has to be increased and the insulin dosage readjusted. Not rarely it happens that a patient with rather mild diabetes does not become sugar-free until insulin is used in considerable doses, 60 or 80 units a day, and then after an interval there develops a rapid increase in his own insulin production, notable in frequent, though usually mild, hypoglycemic reactions. It may be necessary to decrease each insulin dose by 10 or 15 units until finally none is used. It is seldom necessary to give more than two doses of insulin daily, morning and evening. In making the change from three doses a day to two, the best method is to reduce the noon dose by 6 or 8 units at a time and to divide the amount taken from the noon dose between the morning and evening doses, so that the number of units taken daily remains the same. One basic fact in metabolism has to be kept in mind when planning reducing diets. The patient's excess fat will decrease because it is called on to supplement an inadequate diet. This means that the patient is actually on a high fat diet; therefore if acidosis is to be avoided the carbohydrate ration must not be too low, though fat may be cut to the lowest practical minimum. No concessions have been made to the needs of growth which a child demands. Growth first of all requires more food, more calories, and especially more protein. While experience indicates that 1 Gm. of protein per kilogram of body weight suffices easily for a majority of adults, 2 Gm. is not too much during the growth period, and some children seem to thrive best on even more. The total food allowance must be increased as well. It is not possible to give a mathematical rule for general guidance, but the end to be attained is normal weight and normal stature and this is easily attainable. Bony growth requires lime. The calcium content of the common adult diet is very low. Therefore milk is a necessity in the ration of a healthy child. A quart of milk can easily be made a part of the ration of a diabetic child nowadays, since with insulin the milk sugar causes no obstacle. Still, considering mineral requirements and no less the vitamins, raw fruits and green vegetables must also be included. Fruit juices, tomato juice, the leafy vegetables, carrots, specific fats, such as butter and cod liver oil, each furnish some element essential either to growth or health. Vitamins are largely destroyed by heat, especially under full exposure to the air, and the pot water containing most of the min-

eral salts too often is discarded. Steam pressure cooking, it would seem, is the proper way. On this account some canned vegetables are more wholesome than the fresh article prepared at home, because the cooking of the canned vegetable is done after the tin is sealed. Of commercial diabetic foods there is no end. A few, such fruits preserved without added sugar, have a limited usefulness. Many of these novelties, especially the endless varieties of breads and biscuits, are at best harmless and a majority are palpable frauds. And there is no need now why a man should persecute himself by trying to eat a slice of some soggy, heavy, tasteless loaf in the delusion that he is better for thus mortifying the flesh. Far better for him physically, and transcendently better for him mentally and morally, to eat honest bread, figure the cost in starch and pay in units of insulin. There is no doubt that a diet may be adequate to preserve life indefinitely and yet be inadequate for that margin of surplus energy which is the essence of human living. Mere weight does not indicate the difference. Foster does not attempt to generalize about diet in diabetes. He never treats diabetes; he attempts to treat a person. Arteriosclerosis is a common complication of diabetes; some believe that diabetes induces sclerosis of the arteries, though the mode of this is not clear. A few have convinced themselves that the diets employed in the therapy of diabetes in the past are directly responsible for vascular hypertension and vascular sclerosis. In two types of arteriosclerotic complication—retinitis and circumscribed gangrene of the feet—it is possible to study results of different modes of treatment with some exactness. In both these conditions the results are better and prompter when the patient's diet is high in starch and low in both protein and fat. Liberal doses of insulin are of course necessary. There is reason to believe that regeneration of liver cells is promoted by a starchy diet and delayed by one rich in protein. In cases of cirrhosis of the liver complicating diabetes, this principle has been utilized with rather surprisingly good results. In the preoperative and postoperative periods when the disease requiring surgical intervention is complicated by diabetes, correct judgment as to modes of nourishment often determines whether the patient lives or dies. First of all, because of the nature of the disease or of vomiting, no food can be given by mouth. The fasting man burns chiefly fat, the less essential tissue. But when the diabetic person burns chiefly fat, acidosis results. This is why coma was formerly so common a result of serious surgical operations. About 100 to 150 Gm. of sugar must be metabolized daily to prevent acidosis. If this cannot be taken by mouth, dextrose must be given intravenously. From 20 to 40 Gm. of dextrose every two or three hours with adequate insulin will prevent clinical acidosis in any surgical state. But this dextrose must be burned to prevent trouble, and if it appears in the urine it is not being burned. Dextrose should not be given by hypodermoclysis; one cannot be sure of its rapid absorption and occasionally it seems to be irritating. It is better to give 25 to 50 per cent solutions directly into a vein. Intravenous nourishment is the only dependable method when one is confronted with acidosis, and acidosis is the chief hazard that confronts the surgeon. If he knows how to handle this problem, the rest can wait.—Journal A. M. A.

INCREASE IN MENINGITIS REPORTED AT HEALTH MEETING

A progressive increase in the number of cases of meningococcus meningitis has taken place in this country during the last five years, Dr. R. C. Williams, of the U. S. Public Health Service, told the state, provincial and territorial health officers as-

sembled in Washington for the joint meetings of the Annual Conference of State and Territorial Health Officers with the U. S. Public Health Service and the Annual Conference of State and Provincial Health Authorities of North America. "It is true that the actual number of cases is not large when compared with the total population," Dr. Williams said. "It is significant, however, that each year there has been an increase over the preceding year and that this rise has continued for five years."

No comparable increase has been reported from Europe. The total number of cases reported throughout the United States for the past five years is as follows: 1925, 1,859 cases; 1926, 2,226 cases; 1927, 3,204 cases; 1928, 5,781 cases; 1929, 9,660 cases. During the first 22 weeks of 1930, forty-seven states reported 5,400 cases.

The control of this disease is extremely difficult, Dr. Williams said. Studies conducted in various parts of the country have failed to produce any new methods of importance. The most important preventive and control methods now known are: prompt recognition of cases of the disease; prompt reporting to the health authorities; avoidance of overcrowding; maintenance of high standards of bodily vigor; sterilization of dishes and eating utensils; optimum of fresh air and sunshine for carriers and convalescents.—Science Service.

NEW USES FOR X-RAYS FOUND

X-rays have been found helpful in the treatment of many diseases for which they are not generally used. Among these conditions are boils, carbuncles, certain cases of pneumonia, erysipelas, inflammation of the kidneys, inflammation of the parotid gland and many other inflammatory conditions, Dr. Arthur U. Desjardins, of Rochester, Minn., told members of the American Medical Association at the Detroit meeting. Irradiation tends to destroy the white blood cells or leukocytes, which gather to defend the body against infection. It would seem that a destruction of these defender cells would do more harm than good, but Dr. Desjardins explains that the white cells contain a substance that enables them to destroy the invading germs. Irradiation, by destroying the cell, liberates the protective substance and makes it even more readily available for defensive purposes than when it is in the intact cell.—Science Service.

MENTAL DISTURBANCE MAY CAUSE ORGANIC DISEASE

Actual organic disease may result from mental disturbance, Dr. Cornelius C. Wholey, of Pittsburgh, said at the recent meeting of the American Medical Association.

Dr. Wholey described the case of a fourteen-year-old girl who had attacks of what seemed to be gall-bladder disease in imitation of and in sympathy with a real case in her mother. There was no evidence of organic disease but the child's digestive system became so upset that she will probably never be healthy.

Another healthy girl, aged 18, grieved so over the death of her mother that she took to her bed six weeks later and remained there until the age of 40, when she died of exhaustion, toxicity and lack of nourishment.

In these and similar cases described by Dr. Wholey, the mental and emotional disturbances upset the normal functions of the sympathetic nervous system which regulates the body's secretion, circulation, digestion and respiration. If the upset persists too long, it is likely to become organic.—Science Service.

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THE PASSING OF THE FAMILY DOCTOR AND PRACTICE OF THE FUTURE—PRESIDENT'S ADDRESS

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It would be unkind and ungrateful indeed if I did not at this time extend to you my thanks and appreciation for the honor you have conferred in selecting me to officiate as your president during the past year. The duties connected with the office, while somewhat exacting, were made pleasant by the thought that I was rendering a bit of service to the profession. I also acknowledge gratefully the assistance rendered by the State Secretary, the Editor of the Journal, members of the Executive Committee of the Council, and particularly the sound counsel of our departed friend, Dr. Guy L. Kiefer.

To my distinguished successor I bequeath all the honor, pleasures, hardships, and sleepless nights incident to the office, as well as pleasant thoughts of anticipated accomplishments socially, politically, and professionally, probably mingled with some disappointments which will possibly follow an earnest desire to do his bit to emancipate humanity from disease.

†For professional note see Volume 28, page 714, *Journal Michigan State Medical Society*.

Being well aware that making statements concerning the future, whether it be concerning the weather, the stock market, or medicine, is a somewhat hazardous business, I have the temerity, nevertheless, to present my views, based on an experience of twenty-eight years of practice. To make proper deductions it is necessary that we review the past, and analyze the present, so that we may the more intelligently estimate the fu-

ture conditions of medical practice. Three or four decades ago specialists were the exception, and were confined to the larger cities, where they were usually connected with some medical school. Many continued to practice general medicine along with their specialty. The family doctor was the sole guardian of the patient's welfare and treated everything from alopecia to bunions.

If consultation was needed, another practitioner was called mainly to corroborate or to refute the diagnosis. If an operation were decided upon, the time was set and the two usually did the job at the patient's home. When it was a matter of medical treatment the consultant would usually suggest to the attending physician a little change in treatment and state this fact to the relatives of the patient to impress them with his superior knowledge and incidentally to inform them that he had earned his fee.

There were no exclusive obstetricians, no internists, no roentgenologists, no diagnostic laboratories, no fracture specialists, no proctologists, no industrial surgeons, and very few exclusive surgeons, dermatologists, otolaryngologists, or pediatricians, very little preventive medicine aside from vaccination for smallpox, and no clinics except those connected with a medical school, which were used for teaching purposes only. There were no pure food or drug laws and no narcotic law, no birth certificates to file and a physician could and did prescribe some form of alcohol, the quantity and frequency of the dosage of which should today be left to his judgment.

Enteric diseases were rampant. The usual crop of sick babies kept the doctor on the jump during the summer months while fall and early winter supplied him with his annual number of typhoids, the revenue of which in many instances supplied the funds to send son or daughter to college. Diphtheria, scarlet fever and pneumonia and other communicable diseases added materially to his income. The scourge of tuberculosis was everywhere and early diagnoses were not made. There were no building or plumbing codes, no supervision or regulation of water supplies, no food or milk inspection and the tin can and its opener were not yet thought of. The result was that through unsanitary housing and the ingestion of polluted water and spoiled food many people suffered from acute illnesses which now have completely disappeared.

Tonsillectomies were the exception, and if done at all were performed with the tonsilotome, which cut off the top and left the base. Many fractures were undiagnosed since the evidence of an existing fracture was crepitus or angulation or both, and the unfortunate patient was cared for in the home. The functional result depended largely upon whether or not it had been properly set.

The foregoing is recited simply to remind us of the duties, responsibilities and technical knowledge required of the family doctor of years ago compared with that of today.

As time went along changes took place. As our knowledge of the causation of disease through scientific investigation became better known, preventive measures, new modes of treatment, and additional appliances were brought into general use. Soon their number increased to such proportions that the general practitioner could no longer keep himself properly informed, which resulted in the creation of a class of physicians who limited their practices to the treatment of certain types of disease only. These were called specialists under various titles for differential reasons only. This of course took some of the business from the family doctor. Still he kept on.

Hospitals were not being so popular as at present, especially for the "fat and forty" individual who delights to tell of her gall bladder operation, nevertheless they were taking their place rapidly as a community necessity. Rich and poor alike were cared for, but the latter, being unable to pay, caused a large deficit upon the hospital ledger. Members of hospital boards conceived the idea, with the backing of the newspapers and business people, that there should be set aside a day known as hospital day at which time the public should be solicited for funds with which to offset the accrued deficit.

It was found that the mortality in babies under one year was extremely high, due particularly to improper feeding. This fact resulted in the formation of baby clinics where at first only the indigent poor, where the mortality was highest, were invited to bring their babies for instruction on proper feeding and care. Results being highly satisfactory and generally made known, the clinics grew until almost anybody with a baby could obtain this free service. Hence another slice from the family doctor's income, but still he kept on.

The ravages of typhoid fever were terrible. City officials, physicians, and laymen alike demanded a cessation of the scourge. We knew it was caused by contaminated food or drink, but the source was not always easy to locate. Science taught us, however, that a pure water supply would eliminate the disease and the city now without such supply is shunned and avoided. Typhoid being eliminated the family doctor was relieved of another source of income, but he remained at his work.

Early diagnosis of tuberculosis was now the general rule and recoveries followed under proper surroundings and supervision. This not being obtainable in the average home, municipal sanatoria were provided by the city or county. Now most tuberculous people are cared for in this manner and the family doctor is again relieved of this source of revenue.

Before the enactment of workmen's compensation laws, injuries to employees resulted in a great deal of controversy and litigation. Depending upon the settlement, the doctor did or did not receive any compensation, more often the latter. In general, the workmen's compensation law is to be commended, since it provides for remuneration of all concerned.

This law, however, brought into existence another group of specialists known as industrial surgeons. Insurance companies, believing that physicians confining their practice to surgery were probably best qualified to care for the injured, were eager to contract with them to care for all their business, a large share of which could be done just as skillfully by the family doctor. Then followed the first aid room in the factory, presided over by a trained nurse. Many minor injuries are now cared for by this nurse, and I understand medicines and hypodermics are administered for various ailments in violation of the State Medical Practice Act. These activities are supposed to be under the supervision and direction of the factory physician but for a large part he knows nothing about them.

Were the work of the industrial surgeon limited to the above activities there would be no quarrel, but either through advice or recommendation from the nurse or solicitation of the physician, other body ailments which should properly be referred to the family physician which have no relation to indus-

trial surgery are treated by the factory doctor.

Diphtheria, the most widespread plague of child life, occupied a goodly portion of the time, energy, and worry of the physician. The introduction of antitoxin brought a powerful weapon for its alleviation, but it remained for toxin-antitoxin practically to eliminate it. The question of just how this shall be done still confronts us. Our late mutual friend, State Commissioner of Health Dr. Guy L. Kiefer, many times said it was the doctor's job. I have a great deal of respect for Dr. Kiefer's opinion and believe he was correct when he made that statement, but from my experience in public health work I am a little apprehensive that it would not be practically successful because in the aggregate we are a body of specialists and no one particular group will or does assume the responsibility. For the family physician this is impossible since he comes in contact with few children and attends a diminishing number of obstetrical cases, although he would undoubtedly appreciate receiving this bit of employment. The obstetrician says it's out of his line, the pediatricist says he has no way of knowing when children have arrived at the proper age in the absence of any birth record. The surgeon should not be asked to perform such a minor surgical procedure, and, of course, other types of specialists are out of the running. Therefore, although I am not completely satisfied with it, until some better system is devised, I believe that school immunization as at present practiced will bring the most satisfactory results.

There is perhaps no one condition which has contributed more to the elimination of the family doctor than the so-called free or hospital clinic. The class of patients who frequent these places are those once treated by the general practitioner, who when sickness overtook them were carried by their doctor until such time as they could save enough, after deducting living expenses, to balance the account. These people were usually a good class of citizen. They were thrifty and took pride in keeping themselves square with the world. But gradually as the clinic increased in popularity and as Jones and Brown received free service, and while the head of the family perhaps was temporarily out of employment, they too availed themselves of the services of the free clinic.

Nor do we exactly criticize this individual for availing himself of this service. *Yet it is fundamentally and governmentally wrong and decidedly un-American for any group of individuals, or organization, to place before our people enticements which tend to pauperize and encourage dependence instead of independence as promulgated in the Declaration of our forefathers.* It follows therefore that free clinics and social agencies are undermining the spirit of true Americanism and are breeding socialistic tendencies.

It is my conviction that the care of the indigent and semi-indigent sick is a function of government and as such should be conducted by the already existing agencies amplified somewhat perhaps to meet the requirements of the various localities.

As has been said many times, medical science has advanced more rapidly during the past three decades through specialization, new diagnostic methods and appliances, laboratory procedures, etc., than during the previous centuries, entailing much necessary additional expense, with the result that the man of average means, with living costs higher than ever, feels he is unable to carry the burden. And although I am sure that we as a profession realize that good health is as sweet and dear to the poor as the rich and acknowledge that all people are entitled to the best which medical science affords, we feel, nevertheless, that since all other individuals connected with the so-called hospital clinics are compensated from community funds, the physician should not be asked to carry this unjust burden gratuitously.

Nor is the doctor always guiltless in aiding the cause. Occasionally a patient is deliberately referred to the clinic when he should be on his own; again a physician is forced, either through social position or hospital connection, to render free service. Occasionally he plays deliberately with a commission or bureau violating professional ethics and disregarding all standards of professional conduct.

I have never yet received a satisfactory answer to the query—Why the free hospital clinic? A partial answer may be gleaned from the following incident which is self-explanatory. A physician on service at a clinic told one of the admitting officers that Mrs. Jones should go to her private physician and that Mr. Brown was properly a city charge. The attendant replied by say-

ing, "Why doctor, if we did that with those who come here I would lose my job." This reply is obvious and needs no further comment. But this is not a symposium on clinics. They are here doing a wonderful work even though suffering from abuses, and undoubtedly will remain until some other system supplants them.

I know of but one condition for which the family doctor has no competition, and that is making the emergency night call. For the emergency at two A. M. he is still the first friend of the family. While laboring to relieve the patient during the course of the conversation he is apologetically informed that father was injured at the factory recently and of course the factory doctor took care of him, that Sammy recently had his tonsils out by a tonsillectomist, and that when daughter contracted pneumonia of course they wanted the best and therefore employed an internist, and mother's last baby was delivered by her obstetrician and that she now took her baby to the clinic; all of which wasn't music to his ears, particularly when he was asked to place the charge for this visit upon his ledger.

How then shall the public in the future receive medical care? A national committee on the cost of medical care has been for more than two years at work attempting to determine the causes but they are still far from their goal. The report of this committee undoubtedly will largely determine the conduct of medical practice of the future. If the utterances of members of this committee, and particularly its chairman, Dr. Ray Lyman Wilbur, are of any significance, and I believe they are, I can see only one outcome, namely, some form of state medicine.

From a news item I quote Dr. Wilbur less than a year ago as saying, "A new social significance for medicine—to give everyone, regardless of residence or economic condition, the best the profession affords, and to make medicine fit in with the other social forces so that its distribution will be uniform, is vital in this age of science and democracy." No system of state medicine could be better defined, and when men of our own profession holding high official position in our government come out boldly with these statements, I, like Belshazzar of old, can see the handwriting on the wall.

At about the time of Dr. Wilbur's utterance came the following from Dr. Glen Frank, President of the University of Wisconsin: "Our only hope of a healthier nation, unless we go bag and baggage to state medicine, lies with the unselfish doctor who will consciously reduce his income by giving patients advice that may keep them from falling sick again." The inference is that state medicine will practically eliminate disease. If this were true the countries of Europe where the system is now in operation should be the healthiest in the world.

The physician is the greatest philanthropist in the world, having preached the gospel of good health and disease prevention for years, thus diminishing his own business and financial reward. What other individual, business, or organization does likewise? Our own state society is annually through its self sacrificing members gratuitously preaching the gospel of good health to thousands. What other profession or organization has given a benefactor such as Jenner, Pasteur, Walter Reed or a Gorgas to the cause of preventive medicine? Scores of others have devoted their entire time or even sacrificed their lives that others might live.

No one can deny that basically the dissemination of information for disease prevention is an educational institution. Therefore, since the laborer is worthy of his hire, the physician may lay claim to compensation as instructor; or conversely, the educator should, as a true American, do his bit for humanity, by also unselfishly diminishing his salary. I have not heard, however, of any propaganda on the part of teachers or educators toward such an object.

I have advocated for years and still believe that the truths of scientific preventive medicine as available today, properly taught in our public schools, will eliminate more disease than all systems of state medicine in existence or that ever will be concocted.

I have touched only here and there upon a great subject which the masters of thought have been unable to solve as yet, but changes will come through the great processes of evolution in the scientific, industrial and political world and the doctor, the nurse and the hospital must and will adjust themselves to meet the everchanging needs which disease inflicts upon humanity.

We see, then, the factors which have tended to eliminate the family doctor. The

present system with its hodgepodge of clinics, bureaus, commissions and what not, sponsored by all sorts of legal, official, and non-official organizations and societies, is unsatisfactory to both the public and the doctor, resulting in a great economic waste and duplication of effort. What, then, shall take its place?

Dr. M. L. Harris, immediate past president of the American Medical Association, has advocated strongly that county medical societies incorporate and organize for business purposes to establish medical centers owned, controlled and managed by the profession, where all classes of persons who are unable to pay regular fees to their own physicians for medical care, can be given the highest type of medical treatment at prices within their means. This system devised to supplant the free clinic has a serious drawback, namely, the matter of financing. The average physician is unable to invest a sufficient amount for its establishment, and much less able to subsidize it, since its revenues would be inadequate for its maintenance.

Although it is unnecessary for me to state that I never have been, and am not now, an advocate of state medicine, nevertheless I believe that a system somewhat like the following will within the next few years supplant the present methods of practice. The present tendency in caring for the sick, as in industry, business, and finance, is centralization. To care for the indigent and semi-indigent sick most efficiently and economically, a centrally located county hospital with convenient township units would be established somewhat after the plan suggested some years ago by the late Dr. Victor C. Vaughan, but which he never made public.

These hospitals would be completely equipped and maintained at county expense and manned by a crew of medical and surgical specialists on eight hour shifts. The township units would care for maternity cases, acute ailments and emergency surgery in their particular district, while the more serious and complicated cases would be transported and cared for in the central county unit. The system would operate by the patient calling the hospital, which would send out an ambulance or motor car for his transportation, or perhaps if the distance was great, in case two or three counties combined the service, and the need for speed was urgent, the airplane ambulance would

be pressed into service. Indeed, I would not be surprised to see hospitals of the future provide nearby landing fields, or perhaps one on its roof.

The charge for care in these hospitals would be determined by a board of trained commissioners whose appointment and tenure of office would be as far as possible removed from politics, and the deficit would be shouldered by the county.

An outpatient department would operate daily and emergencies of accident or illness would be given twenty-four hour service. This type of service is now in operation for communicable diseases and I see no reason why it should not work out equally well for other ailments.

Of course the pay patient would continue to be treated by his own physician at a private hospital or his home as at present.

The advantages of such a system would be:

1. To make available to everyone the best in scientific medicine.
2. Eliminate the evils of free clinics.
3. Distribute the cost to all in proportion to their worldly possessions.
4. Provide compensation for the doctor who now works gratis.
5. Eliminate duplication of service, with resultant lower costs.
6. Eliminate largely the annual drives for welfare funds.

The above system might be termed a fantastic dream, but let me remind you that much of it is already in operation today. Great ribbons of concrete provide smooth transportation in heated ambulances for patients residing thirty to fifty miles distant, and the airplane ambulance is already in existence. The question of whether a patient is free or part pay is today determined by social workers, and the deficit in the cost of operation is met by funds from the community chest.

It seems that because of the demand and the complicated affairs of today some such system will be evolved to care for the indigent and semi-indigent sick of tomorrow.

But be not alarmed; state medicine is not coming—it is here, operated and controlled by private corporations and organizations instead of governmental units.

And thus have I endeavored to indicate to you the conditions which have eliminated the family doctor, the man who as first friend of the family was consulted not only for sickness or accident, but whose counsel and advice concerning family affairs, financial troubles, legal difficulties and moral obligations, was generally accepted by his patrons.

The family doctor, an institution beloved by generations of the past, but now extinct.

May his memory never perish.

MODERN MEDICINE

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A great many changes have taken place in the relation of physicians to one another and to the public during an experience of forty-six years in the practice of medicine. These changes have been brought about largely through the increasing complexity of our social organization and our different modes of living. In the realm of knowledge empiricism has yielded to exact information and mysticism has lost its former hold upon the race. The evolution has been so rapid as to make the problem of adaptation a very vexing one, and while it will be solved ultimately, we are at present in a state of confusion and unrest.

For our own immediate consideration there are some rather important questions which I should like to raise. First, is the general practitioner to survive and, if so, under what circumstances? Secondly, will specialism practically meet the needs of society? Thirdly, under what condition is state medicine justified, and what will be the result?

I cannot escape the judgment that the physician with a broad, general knowledge of medicine must survive, although the day when the individual practitioner was sufficient unto himself is past. The high type of general practitioner fills a need, especially in the smaller communities, which cannot be met by the man who devotes all of his study to one branch of medicine. But in the past few years modern educational incentives

†Dr. Sawyer is Regent of the University of Michigan.

and encouragement have tended towards specialism and the passing of the family doctor. It is therefore with the idea of promoting the interest of the general practitioner that organized medicine is functioning, and the schools are offering courses which give to him the opportunity to keep in touch with the recent advances in medical science without serious sacrifice of time, relationship, or expense.

Considering the expenditure in energy and money in the effort to raise the standards and improve the facilities of the undergraduate school of medicine during the past twenty years, is it necessary to provide for post-graduate training for physicians in order that they may meet the legitimate demands of the community for medical service? To you who have gathered here tonight, it would be superfluous to point out the vast extension of the boundaries of our science in recent years. Be the undergraduate course what it may, it is wholly inadequate to make more than a beginning in either the art or the science of medicine. Your presence here tonight is ample testimony that further opportunity for medical teaching is necessary to the successful solution of our professional responsibilities. Assuming that further medical instruction is not only important but imperative, the question arises as to how it could be provided, and upon whom rests the cost.

An analysis of the cost per year per student in sixty-seven medical schools shows a deficit of about \$452 over what is received in fees. Averaging the minimum time spent in preparation for the college degree, there is a three year period between high school graduation and medical school entrance. Assuming that the majority of students come from tax supported or endowed institutions, and that the financial deficit is about the same as in the medical schools, we see that the graduate in medicine costs the taxpayer \$3,154 upon graduation.

While post-graduate work has been going on for many years more or less effectively, if somewhat inconveniently for most of us, it has never been as well organized as the undergraduate program, and one of the first questions which very properly comes up in providing for it is the very important item of its cost. Who may properly be responsible for the cost? Should it be paid by the doctor or is its expense a proper item to

be spread upon the tax roll? Both views are held. Personally, I am inclined to think that the cost should be shared by both, as both are the recipients of benefit. Post-graduate education increases the opportunity of the doctor to widen the field of his activities and at the same time assures the public of improved service.

One reason that I am certain that physicians should receive consideration over other professions in this problem of advanced education is that the medical profession is becoming more and more a public servant, devoting time, energy and money for which no means of recompense has, as yet, been provided. The effort to remedy this gap in our educational system in Michigan has resulted in a working agreement between our medical schools, organized medicine and the practising physicians, which promises much for the advancement and dissemination of scientific knowledge, improvement in the social and economic position of the medical profession as a group, and increasingly better methods in the care of the sick. No one can read the record of present activities in post-graduate medical education, as contrasted with but ten years ago, without being convinced that this phase of medical education is destined to become vastly more important than heretofore, and I am going to prophesy that in the course of another ten years, instead of being regarded as the poor relation in the household, post-graduate medicine will come to occupy a more dominant position.

Interested as I have been for so many years in the development of post-graduate education under the aegis of the University, you will understand how gratified I am at the progress that is being made through the recently organized Department of Post-Graduate Medicine under the direction of Doctor Bruce. The association with the Michigan State Medical Society in this enterprise has been very pleasing to me, for, as many of you know, next to my family and the responsibilities of my practice, the interests of the University and the medical profession are nearest to my heart. At times in the past the relations between the profession and our University Medical School and Hospital have not always been as happy as I should have liked. I am very hopeful at this time that the unity of interests incident to our present affiliations will result in a new

era in mutual understanding and helpful relationships.

Now as to the relation of the medical profession to the public, introducing a new subject, those who have given much study to these matters are agreed that the furnishing of adequate medical care to all of our people at a reasonable cost is the most important problem in the care of the sick. Lack of knowledge of disease prevention, treatment, and cure does not enter into this problem, for we have that knowledge. Our difficulty is in making it available. The actual cost of necessary care in illness is by no means prohibitive, for the total spent yearly by the American people is less than 3 per cent of our national income. Without increasing our outlay by a single dollar, medical care may be adequately provided. Estimating the average income at approximately \$2,000, it would not seem a great hardship to set aside \$60.00 for medical care. This is the proportion of income now being expended. Unfortunately, nearly one-third of this **amount is spent uselessly** and often harmfully for patent medicines, useless appliances and quack doctors. Michael Davis, in a recent study of medical cost, states that over fifty per cent of all the burden of sickness falls upon one-sixth of the population, so that some form of provision for sickness other than budgeting the income is suggested, probably some form of sickness insurance.

The Five Years Study of the Costs of Medical Care will add greatly to our present knowledge, but while looking hopefully to the conclusions of the Committee, might it not be well to consider some of the possibilities toward bettering our own position and helping the public to wiser ways in its search for health.

Quoting in part from Doctor W. C. Rappleye, "There are well recognized defects in present medical services. An important one is that of partitioning practice into organs, systems and technics, with consequent dispersion of responsibility for the patient as a whole which not infrequently turns out to be unnecessary, costly and misleading. This tendency has arisen partly out of the eagerness of physicians to provide up-to-date medical care, sometimes without realizing the limitations as well as the value of special laboratory, roentgen-ray and "expert" services, and partly from the demands of patients and relatives who think that roent-

gen and laboratory examinations, specialists, expensive hospital accommodations, consultants and special nurses are necessary to insure adequate care. There evidently is considerable unnecessary surgery done, quite often by physicians with little surgical ability or training.

"A part of the unnecessary cost also arises from the common practice of self-diagnosis and selection of specialists by patients. Frequently, it is not the services of an 'expert' that the patient needs. Shopping around among experts is likely to be expensive and probably has arisen, in part, because of the incomplete services which many physicians provide for their patients. Studies of the needs and demands for medical services seem to show quite clearly that about 85 per cent of medical needs are for six general groups of disorders, for the usual care of which a properly trained physician should have no difficulty. Some outside assistance is needed occasionally and should be secured on the advice of the patient's physician. Many patients do not need the services of specialists; patients, physicians, and the public should be made to realize that."

The relation of the general practitioner to the specialist has been economically difficult and subject to frequent abuses. This situation demands an appreciation by the laity of the value of the service rendered and a willingness to compensate for it. A division of fees is an ofttime harmful influence and tends to degrade medical standards. An effort is being made to discredit this evil and correct the practice. Just what the solution will be which properly recognizes the rights of the referring agent and encourages resort to skilled assistance is yet unanswered. The welfare of all parties must be considered.

While the profession has been for years apprehensive of "state medicine" and many worthwhile social movements have been deviated or retarded on this account, there is, I believe, much less danger of governmental interference in the affairs of the medical profession than in industry, for medicine has always stepped into the breach in great national crises, and has tried constantly to adjust itself to the needs of the everchanging social order. With one disease after another yielding to the steady advance of medical science, by comparison, how poorly, indeed, has the great octopus, industry, met its obligations! It has come into dominance ac-

accompanied by mal-adjustments and suffering, comparable only to the by-products of war and pestilence, and the unemployment periods are as regular and as devastating to life and happiness as were the famines and plagues in the earliest records of mankind. If the industrialist spent half the effort in an attempt to regulate production to the normally operating laws of supply and demand that is constantly being spent in the creation of a fictitious demand there would be much less probability of governmental interference in the problem of industrial overproduction, with its inevitable accompaniment of unemployment.

England is frequently referred to as an example of iniquitous medical legislation, which it is claimed places the doctor in a position of economical and professional servitude. In this case, as in many others, we have passed judgment upon a problem, in which our information is not only limited but which is not always in accord with the facts. No one is more thoroughly convinced than I that state medicine does not afford the answer to the many-sided problems which are presented at this time. However, before passing judgment, let us try to assemble some facts.

Notwithstanding many reports to the contrary, I have every reason to believe that the rank and file of the profession of Great Britain are much better off economically and professionally at the present time than before the passage of the National Health Insurance Act. Previous to the passage of the Act, there were in England over 3,500 so-called "Friendly Societies" whose operations were similar to those of our lodge practices so general in this country a few years ago. These had grown to such an extent that unless a man had an independent income which permitted him to wait through a protracted period for the establishment of a practice, he was literally compelled to affiliate with one of these organizations in order to maintain himself.

The economic difficulties incident to a population of one-quarter to one-third in excess of the country's ability to support it properly, together with the unsound conditions of medical practice, made it a simple step to the planning of state control, maintained by the combined contributions of employers, employees, and the state. Through governmental regulation a more

equitable distribution of patients and professional income was assured and the income of the practising physician was increased by about \$1,000 a year.

The principal point in this whole matter is that the general plan of service was really introduced by the doctors themselves through the establishment of the so-called "Friendly Societies." The British medical profession cheapened itself by the poorest of makeshifts in co-operative bargaining and this condition continued almost to the point of starvation for large numbers of the profession until the government stepped in and solved the problem for them.

In considering our many-sided problems, we are too often getting "the cart before the horse" and found applying a placebo or giving symptomatic treatment when a more careful study would reveal the availability of a specific. In estimating the cost and inadequacies of medical care, must not industry as a cause of incapacitating conditions both immediate and remote come in for its full share of responsibility? In its ruthless quest for dominance, it is only natural that industry should seek to make medicine its servant, and in a great measure it has succeeded, but there is more likelihood that industry, rather than medicine, will eventually come under the control of the state. Unless the craze to produce, to distribute and to oversell, with its inevitable cycle of seasonal unemployment and economic distress, be curbed by industrialists themselves, governmental regulation will be more necessary and of more specific benefit than will any attempt at the socializing of medical practice.

Medicine is more than ever before a career of public responsibility in all of its branches. The power for good of the knowledge available for us is balanced by the dangers of our ignorance; the confidence of our fellows which enables us to console endows us with extraordinary powers to deceive. The work we do infiltrates with its influence the destinies of individuals, families, communities and nations. To be effective we must develop a type of practical philosophy of work—a sensible idealism, which without expecting the impossible of our own frail humanity—or that of others—will ever keep before us the true purposes of our profession.

THE LEGAL ASPECTS OF X-RAY

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Many uses have been found for the X-ray within the comparatively short time since its discovery and especially within the last ten years. It is now used extensively in chemistry, physics and allied sciences, both experimentally and commercially. However, as there are so far no legal opinions involving the use of X-ray except those pertaining to the human body, the legal aspects of X-ray are more or less confined to three main divisions, namely (1) Liability arising out of the use of X-ray, either for diagnostic or therapeutic purposes, (2) Liability arising out of failure to use the X-ray, and (3) X-ray plates or films as evidence.

The courts do not seem to have advanced with X-ray as a whole for there seems to be some difficulty in getting past the elementary problems of the field. They have progressed in the manner in which the science is applied, but the problems presented do not take the wide scope that might be expected from present day usage.

From a medical standpoint the opinions rendered in cases involving liability due to negligence are instructive. From the legal side those in which films were used as evidence present a variety of technicalities and diversified opinions. The respective laws governing such evidence in the various states differ only slightly.

The State and Federal rule regarding physicians in general is as follows: "A physician is bound to bestow such reasonable and ordinary care, skill and diligence as physicians and surgeons in the same neighborhood, in the same general line of practice, ordinarily have and exercise in like cases." The physician is not an insurer and cannot be held liable for a bad result unless proof of negligence is produced. In the case *Evans vs. Clapp* (Mo. App. 1921), 231 S. W. 79, it was said, "The standard care in the use of X-ray machines must be derived from the users thereof, and the term similar localities must in this connection have a general and somewhat relative meaning," but the Supreme Court in New York in 1918 says, "In the case of a specialist the standard would be ordinarily that possessed by practitioners devoting special attention and study to the same branch in similar localities, having regard to the present state of

medical science," and determining the degree of skill required it is stated in *Pike vs. Hon-singer* (1898), 155 N. Y. 201, 210, that "he is bound to keep abreast of the times." Therefore there can be no urban and rural rule for the use of X-ray as there is for the general practitioner who is negligent if he does not use the care and skill of the community. X-ray is not used under circumstances of emergency as other measures sometimes are, so a higher standard is possible in this field.

Laymen, doctors and lawyers are familiar with the fact that pioneers in X-ray were unduly exposed and suffered the consequences of their ignorance of the destructive powers of the agent with which they were working. The manufacturers of equipment have been untiring in their efforts to provide protection for the operators. Since mechanical improvements have been made there has been an increase in the accuracy in methods of estimating the output of various makes of machines. Research and experience has prescribed dosages to be administered, but notwithstanding this fact, there is yet an inherent danger from X-ray. Because of the multiplying number of machines sold, and used by doctors, laymen, and practitioners of the various cults, many of whom are without training, except for a short period of instruction by the salesman, the actual danger from X-ray is perhaps even greater than it was a few years ago. Due to the fact that X-ray has proven itself to be of untold value in many cases the laity has learned to request its use. Its invisible properties have such an appeal that in the hands of the unscrupulous the X-ray is unduly exploited as a source of revenue only. Therefore, an increased number of

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patients in the hands of a large number of untrained operators necessarily increases the proportionate risk. In regard to the dental profession, Dr. Raper, an authority on dental radiography, first advocated that each dentist do his own radiographic work, but now has assumed an entirely opposite stand and writes "but as dentists take up the work I am appalled at the ignorance and carelessness displayed." Aside from the damage done patients due to misinterpretation of radiographs by those not well versed in reading films there is the danger of injury to both patients and dentists from over-radiation. X-ray has at the present time a definite place in therapeutics, and dosages can be computed with as much accuracy as certain drugs. State laws regulate the sale and administration of drugs but very few states devote any attention to limiting the indiscriminate use of X-ray. In all of the states, the practice of medicine without a license is a misdemeanor and punishable by fine or imprisonment or both. The New York statute regulating medical practice applies to "every means and method that could be used or claimed to be used to relieve or cure disease or infirmity unless excepted by the statute." An X-ray operator is therefore practicing medicine and must be licensed. Superfluous hair is a deformity under the laws of the same state and its removal by means of X-ray with the possible danger of discoloration or subsequent telangiectasis is in violation of the medical practice act.

Most of the malpractice cases fall under the head of negligence but there are three other sources of liability which must be considered: (a) Cases in which the operator guarantees no harm, (b) the fact that X-ray is inherently dangerous, and (c) electrocution from high tension current.

The American Roentgen Ray and Radium Society and the Radiological Society of North America have for many years maintained committees on safety and standardization. The former has attempted to formulate suggestions for safety and these should furnish the courts with a standard test for negligence. The Roentgenologist has already been recognized by courts as highly specialized and is considered independent of any school of healing and should not be held to the standard care limited to the community. In liability arising out of the application of X-ray as a therapeutic agency, the burden of proof lies with the plaintiff.

In the case of *Holt vs. Ten Broeck*, 134 Minn. 458, 159 N. W. 1073, Ann. Cas. 1918 E 256 (1916), "In determining negligence it can make no difference whether the one operating the machine is a physician or a lay expert. The care required is ordinary care. It is the care exercised by and to be expected from one reasonably skilled in the use of the appliance. The rays were not applied for curative purposes but to obtain information." This is a case dealing with injury following exposure for diagnostic purposes. Such cases are now rare and should not occur at all since the advent of intensifying screens and high capacity tubes. It should not be necessary for a good technician to make numerous exposures in order to obtain films of diagnostic quality. In institutional work, whether the physician is employed by a charitable institution or a private group, he is responsible for acts wherever committed, according to the Michigan Law. If the physician is employed by a corporation, the corporation is not liable if they have used the best judgment in employing such a physician. Many corporations throughout the country employ physicians and in some cases part of their medical duties include whatever X-ray work is considered necessary. Charitable institutions are said not to be liable to patients injured in regular course of treatment, but this rule does not extend to other than charity patients taken care of at the same institution, nor is the physician personally relieved of responsibility. (*Marble vs. Nicholas Senn Hosp.*, 102 Neb. 343, 167 N. W. 208, 1918.) The following quotation should be of interest to physicians devoting part of their time to radiology and to such work in hospitals. "If a physician undertakes the treatment of a patient unable to compensate him, his liabilities for negligence or malpractice are the same as in the case of any other patient."

The insurance companies carrying malpractice insurance now have a clause in their policies stating that they are not liable for suits brought about by damages after X-ray has been used for therapeutic purposes. Many general practitioners using machines are not aware of this nor does the salesman selling the machine point out this fact in his policy. It is indeed questionable whether some of these men do any damage as they make as few exposures as possible and as practically all of the so-called burns occur from therapy. The gen-

eral practitioner who is required to do therapy under exceptional circumstances should proceed carefully. Sometimes he is situated in an isolated community so that any X-ray work he may do, either diagnostic or therapeutic, is better than none at all. X-ray therapy malpractice insurance can be secured at high rates but it is obvious that the insurance companies consider the procedure dangerous and do not encourage every policy holder to attempt such a form of treatment.

The opinion handed down in the case of *Runyan vs. Goodrunn* (1921), 147 Ark. 481, 228 S. W. 397, 13 A. L. R. 1414, dealing with liability for injury by X-ray, says it was the defendants' duty "to exercise ordinary care to see that this department was equipped with such apparatus as was generally approved by roentgenologists as best adapted for the proper diagnosis and treatment of diseases; also to exercise such care to provide competent specialists to do the work in that department . . . the X-ray machine . . . operated by a competent expert is of inestimable value to mankind but otherwise it is an exceedingly dangerous agency." In the case *Sweeny vs. Erving* (1910), 35 App. D. C. 57, 43 L. R. A. (N. S.) 734, 228 U. S. 233, 35 S. Ct. 416, 57 L. ed. 815, the court seems to assume that anyone licensed to practice the healing arts should have a full knowledge of all branches of medicine and surgery. No recognition is given to any special training in the various fields. The following is taken from the above case: "The use of X-ray in diagnosis and treatment of disease is recognized and practiced by the medical profession. Such being the case we see no reason why a different rule should apply to practitioners in this line than is applied to other practitioners. The operator of the machine being a physician is irrelevant. It must be determined for what purpose X-rays were used. Only in treatment should the test of best judgment apply."

In some instances the presence of an X-ray burn has been satisfactory evidence that negligence did exist, the rule evidently being that proper equipment properly used produces no burn; in other words, "the thing speaks for itself" principle having been applied. A ruling of "res ipsa loquitur" contrary to the weight of opinion is given by the Supreme Court of Minnesota, *Holt vs. Ten Broeck* (1916), 134 Minn. 458.

159 N. W. 1073, Ann. Cas. 1918 E 256. This is a jurisdiction that permits the jury to draw an inference of negligence in such cases and to consider and weigh the inference in the light of the facts and circumstances and to give it such weight as they deem it entitled to in proving negligence. However, in *Sawyer vs. Berthold*, 116 Minn. 441, 134 N. W. 120 (1912), the court said, "It is undoubtedly correct that negligence of a physician and surgeon cannot be inferred from a poor result alone. There must be evidence from expert witnesses tending to show improper and unskillful treatment in order to sustain a charge of malpractice. A case has already been cited and approved in the District of Columbia (*Sweeney vs. Erving*) in which the plaintiff asked the court to instruct the jury that the burn in itself was sufficient evidence of negligence. The court refused and the plaintiff based her appeal on the failure of the defendant to warn her and for other reasons. In the answer to the appeal the court says, "Generally speaking no inference of negligence can be drawn from the result of the treatment of a physician or surgeon . . . the same rule should apply to practitioners using X-ray as to other practitioners."

The presence of a burn has not generally been satisfactory evidence that negligence did exist. It seems proper to take into consideration the fact that plaintiff was burned, together with the fact that it is possible to use X-ray without burning and that the burn is evidence of some negligence, even if the result of a cumulative effect, but that it is in itself insufficient evidence unless the burn was so severe that no reasonable application could have produced it.

Unusual sensitiveness, idiosyncrasy to X-ray, and similar conditions have not been scientifically demonstrated and cannot be determined by known methods. It is a recognized fact that blondes are slightly more sensitive to X-ray than brunettes. The case of *Antowill vs. Friedman* (1921), 197 App. Div. 230, 188 N. Y. S. 777, recognizes the condition of hypersensitivity, "it having been proven that that specific result might come from proper treatment without negligence . . . that is, in the case of a hypersensitive person." This case involved diagnostic work instead of X-ray therapy. The court held in *Hunter vs. Burroughs* (1918), 123 Va. 113, 96 S. E. 360, that the plaintiff must

prove extreme susceptibility, and must prove that the condition was known to the defendant or could have been discovered by a reasonable examination. The court held that the physician must look for normal and probable results. It rests with the jury to determine whether the defendant had knowledge of the possibility of idiosyncrasy and whether he used due care and diligence in the light of such knowledge. In *Kuehneman vs. Boyd* (1927), 193 Wis. 588, 214 N. W. 326, we find, "It appears uncontradicted by the expert testimony that an X-ray burn is due either to an overdosage or to a hypersensitive skin, and there is no way of diagnosing in advance whether the skin of an individual is hypersensitive to the X-ray." Absolute certainty that injury resulted from negligence is not required,—proof which satisfies the jury's mind to reasonable certainty being sufficient. And it may be said here that any admission on the part of the physician which may be interpreted by the patient or jury that the injury was the result of some error in technic may be this "sufficient proof." The standard of skill, care and diligence required of an X-ray operator is not fixed by the ipse dixit of an expert but by the care, skill and diligence ordinarily possessed and required in the same line of practice in similar localities.

The first case involving liability for failure to use the X-ray was in 1910, *Wells vs. Ferry-Baker Lumber Co.* (1910), 57 Wash. 658, 107 Pac. 869, 29 L. R. A. (N. S.) 426. "Whether it is negligent not to have used the X-ray is a question which the jury must determine with the aid of expert testimony. It is not negligent if diagnosis can be made without it. First we must consider the availability of the machine" and we may add whether the operator of the nearest machine is competent to interpret findings not disclosed by other examinations. It certainly is not negligence for a physician not to have a machine in his office. Failure to use the X-ray in treatment is only an error in judgment and not actionable. There is some suggestion that in case of doubt it is negligent not to use the X-ray, and development seems to be in this direction. In a recent case in the Common Pleas Court of Cuyahoga County, Ohio, it appears from the evidence that experts testified that it was customary and usual to use X-rays in the reduction of fractures of the bones of the limbs. The Court of Appeals in affirming

the judgment said, "We have gone over the whole record of this case and we can come to no other conclusion than that the jury was justified in finding a verdict against the attending physician, and we think that the evidence is ample in the record that he did not use the usual and recognized methods of determining just how this bone could be set." Also in the case *Blex vs. Flack et al.* (1926), 121 Kans. 431, 247 Pac. 640, the Supreme Court of Kansas in affirming judgment against the defendant says, "On the suggestion that a roentgenogram of the arm be made the defendant advised that it was not necessary. The court thinks the evidence sufficient to show that he failed to exercise that reasonable care and skill which the law requires of one of his profession, and that the bad condition in which the arm was left was the result of his negligence." Another decision which has been quoted on various occasions is that of *Taylor vs. De-Vaughan* (1928), 91 Cal. App. 318, 266 Pac. 960. The evidence showed that X-ray examination of the leg of the patient was requested by his parents but they were advised that such an examination was not necessary. The patient was moved to another hospital and later examined by means of the X-ray, which showed the ends of the fractured femur overlapped approximately two and one-half inches. The defendant testified that he had measured the legs with a steel tape and found them both to be straight and of equal length. Other witnesses testified that such measurement is not a sufficient guide to determine whether or not there has been slipping or side movement at the line of fracture. They also testified that tilting of the pelvis may be misleading when measurements such as described are made. The court found the defendant negligent and that he had failed to exercise reasonable care and skill in the following particulars: He had failed to take X-ray pictures to ascertain whether the fracture had been properly reduced, or after the patient had been moved whether there had been a change in position and that he had X-ray examinations made only after repeated demands of the patient's mother and not by reason of correct or reasonably careful diagnosis. And another case, *Whitson vs. Hillis* (1927), 55 N. D. 797, 215 N. W. 480, which dealt with a case where claim for damage was based on the allegation that the physician had failed to diagnose a fracture

in its proper location but after prolonged treatment for fracture in another location had discovered the original fracture. The findings were that "the jury may draw inference that physicians in constant attendance, and in exercise of due care, would not treat a patient for so long a period and fail to make such examinations and tests as would locate the seat of the trouble."

The Journal of the American Medical Association, April 14, 1923, discussing in the medico-legal section a case in the Supreme Court of Minnesota, in which the decision was in favor of the plaintiff, states that "negligence in respect thereto was charged against the defendant, particularly in that he took no roentgenograms to aid in the diagnosis of the fracture or in ascertaining its condition during curative process," and in the issue of July 28 of the same year this paragraph is found, relative to a case in the Court of Appeals of Kentucky. "One could not read the record without being forced to the conclusion that the defendant was negligent in at least one particular of not sooner making a Roentgenogram of the elbow so as to enable him better to treat it thereafter."

The Journal of the American Medical Association, August 21, 1926, in commenting on the annual report of the Committee on Medical Defense of the Iowa State Medical Society, in which report it states that half of the suits brought were based on fractures and dislocations, says, "A physician's failure to avail himself of roentgen rays in the diagnosis and treatment of what is a possible fracture or dislocation is not conclusive evidence of neglect, but a physician armed with a roentgenogram can defend himself much better than one who must rely on certain evidence. In other words a physician in a city, or near a city or hospital where X-ray consultation did exist, would be considered negligent if he did not avail himself of the opportunity to use it, while another physician with an isolated country practice would not be so considered from his failure to use the X-ray."

If there is negligence in failure to use the X-rays then there must be diligence in using them. This is brought out legally in another way in the case of *Van Tinder vs. Birmingham Railway Light and Power Co.* (1919), 202 Ala. 474, 80 Sou. 858. Motion for a new trial was based on an allegation of newly discovered evidence disclosed by an

X-ray examination subsequent to the hearing. The court said, "It is a matter of common knowledge that in cities the use of X-ray for the discovery of internal injuries and abnormal conditions of the human body is of common occurrence . . . if such a plate should have been worth while as a means of revealing the true condition at the time of the suit due diligence had not been exercised in obtaining evidence."

It is worthy of note that within a year after Professor Roentgen's discovery, the first legal case appeared in America (*Smith vs. Grant*, 29 Chicago Legal News 145, Dec. 3, 1896. A plate showing the head and neck of the femur bone was admitted as evidence. The Haynes murder trial in 1897 in Watertown, New York, is the first criminal case in which X-ray evidence was used (56 Alb. L. J. 309, 15 Medico-Legal Journal 246, Oct. 1897). In this case a plate was offered to show that a foreign body was not a whole bullet.

In the legal world it is most important to the jurist to be conservative since the introduction of radical changes might later result in conflicting and unfair opinions. It may be said that since its introduction X-ray evidence has changed from "timorous acceptance" to "implicit trust." The first objection to plates was based on their inherent weakness and fallibility. Experts testified that nobody knew anything about X-ray and the court ruled that juries could not be misled by something admittedly an experiment. Within twenty years after its introduction, the courts treated X-ray as self-authenticating (*Prescott vs. Franks* [1914], 111 Ark. 83, 163 S. W. 180, Ann. Cas. 1916 A.773 and note 1914). "It is now a well recognized fact that by proper apparatus a picture of the bones of the human body may be obtained that will more or less define the skeleton and show any injuries."

The lawyer must know something of every branch of science and business. Sad though it may seem, many lawyers know more of the capabilities and possibilities of X-ray than a number of the medical profession. The lawyer and medical man alike should know that after X-rays pass through the human body, or any other object, they have the property of affecting a photographic plate or film and that after proper chemical treatment this film becomes a permanent record of the different densities through which the rays have passed. Al-

though the film passes through some of the process of a commercial photographic plate it is not a photograph at all but a record of shadows comparable to shadows cast by ordinary light. That X-ray shadows become visible when a fluorescent screen is interposed between the source of these rays and the observer is also, we hope, common knowledge to the professions.

The lawyer and doctor must realize that X-rays have destructive as well as curative properties and are an extremely dangerous agent, not to be used by amateurs, or those unversed in the underlying fundamental principles of physics involved, any more than major surgery should be attempted by the untrained medical graduate. One case is cited in which an X-ray burn was the cause of death (*State vs. Lester* [1914], 127 Minn. 282, 149 N. W. 297, L. R. A. 1915 D 201), and in sustaining an indictment for manslaughter by careless application of X-rays, the court took judicial notice of their extremely dangerous nature.

To the lawyer the field of X-ray includes evidence which to him may be only a picture and to be used as testimony for the purpose of obtaining truth. X-rays are still spoken of as pictures and for this reason it seems to have been customary for the lawyers to relegate the X-ray films to the category of ordinary commercial photographs, even though some consideration was given to their true nature and function. Courts have been influenced by the fact that the plates or films produced have been called pictures and had been processed the same as a snapshot. There is no reason for complaint about the standards of admissibility established, for it is clear that their truth and accuracy are sufficiently protected by the tests applied to ordinary photographs (*Eckles vs. Boylan* [1907], 136 Ill. App. 258) and these tests have practically been transferred from the old category to the new. Courts accept the evidence as a picture but do not ask "a picture of what?" for it is apparent that the importance of having such a picture interpreted has been slow to gain ground. As has been stated the same shadows may be seen on a fluoroscopic screen as can be produced on a film, the latter being a permanent record which may be filed, studied and compared with subsequent films while the fluorescent shadow disappears as soon as the X-ray producing energy is cut off. X-ray does not

affect any of the special senses and therefore has no visibility and the shadows are visualized only as long as the chemical on the screen is excited. The rules applying to the admissibility of photographs were adopted for X-ray films not because the two were identical but that the same precautions used will be a sufficient guarantee of reasonable truth and accuracy. Photographs may be admitted if a person familiar with the facts portrayed testifies that the picture is correct, or may be admitted if proof is established that the process that produced it gives correct pictorial results. A photograph becomes admissible upon proof of its intrinsic accuracy or the accuracy of the process which produced it, that is, reasonable accuracy to inform the jury, assuming that all basic precautionary rules of evidence have been applied. "When the accuracy of X-ray photographs is proven they are competent and should be admitted." (*Ligon vs. Allen* [1914], 157 Ky. 101, 162 S. W. 536, 51 L. R. A. [N. S.] 842.) Some courts suggest "mechanical record" as a term better suited to X-ray films as evidence than the word "picture."

Photographs are competent evidence to aid the jury in better understanding the situation than it could if the condition were described by oral testimony of witnesses. They stand so far as their credibility is concerned upon the same basis as maps or diagrams do. Their correctness is not irrefutable. In each case their correctness depends upon the reliability, accuracy and skill of the person making the diagram or taking or developing the photograph. The correctness of a photograph is not wholly dependent on the action of light. The effect is not in all cases recorded with like results, and these results depend upon the efficiency of the camera and the efficiency of the operator. He may be an expert or an unskilled amateur. It cannot be disputed that the photograph rests upon the human testimony as to its correctness and when unverified carries no conviction as to its correctness (*Higg vs. St. P. and S. St. M. R. R. Co.* [1908], 16 N. D. 446, 144 N. W. 722, 15 L. R. A. [N. S.] 1162, 15 Ann. Cas. 97).

The courts have apparently transferred bodily to radiographs the rules relative to photographs and the general tendency to refer to them as secondary evidence has been fairly consistent. A radiograph is not self-authenticating but must be verified by evi-

dence and the court must be satisfied that it represents a person or thing material to the issues of the case. In *Ligon vs. Allen*, (1914), 157 Ky. 101, 162 S. W. 536, 51 L. R. A. (N. S.) 842, "If no witness has thus attached his credit to the photographs then it would not come in at all any more than an anonymous letter should be received as testimony."

The process by which a radiograph is produced is often open to question and since reliance as to its credibility and competency rests on this issue, the judge must take into consideration all details. It has been customary to admit a radiograph made by a technician who verifies the technic which produced it, and then a physician, surgeon or roentgenologist may testify as to its accurate portrayal of the existing condition. In the opinion *Bruce vs. Beal* (1897), 99 Tenn. 303, 41 S. W. 445, the court says, "It is understood, however, that every picture taken by the cathode or X-ray process would be admissible. Its competency, to be first determined by the trial judge, 'depends upon the science, skill and intelligence of the party taking the picture and testifying with regard to it, and that lacking these important qualifications, it should not be admitted.'" That is, the introduction of a negative is not sufficient but the ability of the operator to produce it or interpret it must be established, and also that there is no misrepresentation by retouching, distortion or improper position of the subject, plate or tube and that proper identification marks are placed upon it. Cross-examination is the lawyer's protection in this regard. A decision in *Bartlesville vs. Fisher Zinc Co.* (1916), 60 Okla. 139, 159 Pac. 476, lays down a rule which raises the standards of admissibility to a class of radiological experts and ignores technicians. "The X-ray plates must be made the part of some qualified witness' testimony and the witness should qualify himself by showing that the process is known to himself to give correct representations and that it is a true representation of such objects." There does not appear to be any foundation for the requirement that admission shall be laid in the testimony of one witness. Most roentgenologists, specialists in the field, rely upon laymen for a large part of their technical work. In some states lay technicians conduct private laboratories for making films, and in some cases diagnose diseases and administer X-ray therapy. If this is in viola-

tion of the Medical Practice Act of the state such laboratories submit the films to the referring physician and he interprets them. No ruling can be found as to whether such operators may give expert testimony in court relative to the abnormalities demonstrated on the films. Some of the cases reviewed in the preparation of this paper revealed the fact that the X-ray examinations were made by men who were not graduates of schools of medicine and surgery.

Radiographs are not inadmissible merely because a considerable period of time has elapsed between the time when the condition at issue is alleged to have arisen and the time when the radiographs were made. The length of this interval bears only upon the weight of the evidence, and not upon its competency.

While there is a certain uniformity among decisions as to the manner in which a plate shall come into evidence there is uncertainty as to what shall be done with it. An X-ray plate to the general public is an X-ray plate and when presented as evidence the question does not arise, "Is this a good film or plate?" or "Is this the best film that can be made portraying the condition under question?" Some films exhibited and admitted show nothing distinguishable even to experts because the diagnostic quality as a point in admissibility is not tested. Often the question arises whether the film shall be shown to the jury. Shall experts explain it, or shall experts disclose what the film shows without showing the film itself? Shall normals be shown to contrast with the abnormal? The two following cases will tend to show what disposition was made of the above mentioned questions. In the case *Kavale vs. Morton Salt Co.* (1928), 329 Ill. 445, 160 N. E. 752, the defendant contended that it was an error for the trial court to permit certain roentgenograms that had been introduced, to be taken to the jury room, because, he argued, they were unintelligible to the average juror. The Illinois Practice Act provides that "papers read in evidence, other than depositions, may be carried from the bar to the jury." And further upon the subject the following case (*Chi. and Joliet Electric Ry. vs. Spence* [1904], 213 Ill. 220, 72 N. E. 796, 104 Am. St. Rep. 213) shows that roentgenograms must be identified as true representations of their subject, as is the rule with reference to photographs. They cannot be read as evi-

dence until proper proof of their correctness and accuracy is produced. The Supreme Court of Illinois has not held, however, as a matter of law or fact that all roentgenograms are unintelligible. In *Gastiger vs. Horowitz* (1927), 221 N. Y. S. 481, 220 App. Div. 284, the Supreme Court of New York, Appellate Division, affirms an error in judgment in allowing an X-ray specialist to testify from notes only and states that the physician should not have been allowed to testify at all. He made no claim that he took the roentgenogram. The plate was not produced and no satisfactory accounting was made for its absence. The physician stated that he examined a plate with a name and number on it and made notes. All that he testified was that the plate showed a broken arm. This finding was not disputed by clinical examination experts. The Appellate Court found no good reason to reverse the decision but stated that incompetent evidence had been admitted. Again the rule of the ordinary photograph applies: "An ordinary photograph is the best evidence of what it contains and parol evidence on the subject is not admissible without accounting for the failure to produce the photograph itself."

The question of what is best evidence is a question of fact. Therefore, normally, photographs or plates are the best and most reliable evidence for they present to the jury a fidelity and accuracy not possible in verbal narration, and summarize the facts. But when the average information and knowledge of citizens subject to jury service is considered, one realizes how limited is their knowledge of anatomy and how little can be relied on their ability to pass judgment on an X-ray film. Many physicians are not well enough versed in the subject to recognize a normal joint, so why ask a layman to be able to understand anything except a complete fracture of one of the long bones. He does not know whether the film is a negative or a positive or whether a line of fracture should show as a white line or a dark line. Shadows of lines in the skull are confusing, and to the laity a spine or pelvis is a veritable puzzle. X-rays are not infallible and their fallibility lies not in the process of making but in the human equation involved. To read a plate or film properly one must have a knowledge of normal conditions and how they appear, and to be able to read with any degree of accuracy one must know anatomy, osteology, physi-

ology and pathology, both normal and altered. A basic knowledge of the normal is required in order to identify the pathological. Even with this training there is no positive guarantee that the plate will be read accurately. Undoubtedly there has been a great abuse of the X-ray in the court room and incompetent evidence has been allowed due to the fact that unskilled men have misinterpreted the findings disclosed or the films were not the best obtainable to properly demonstrate the existing condition. The X-ray film is not always the final and last word in making a diagnosis. There may be injury to the soft parts, possibly a permanent damage, but the X-ray will appear normal. Then there may be bony changes, arthritic, for example, which existed prior to an injury, and have no bearing on the case at issue. The case of *Reeder vs. Thompson et al.* (1926), 120 Kans. 722, 245 Pac. 127, renders the opinion that roentgenograms are to be classed as objective symptoms. "What the physician discovers through his vision aided by the magnifying glass or a roentgen instrument, are objective symptoms. By the use of the roentgen ray a view may be had of the internal conditions not perceivable or to be had by the ordinary or unaided senses. The sense of sight is enlarged by its use, and, although a recent invention, its use is now common, and what it reveals is generally recognized and accepted. Of course, the instrument should be one that is trustworthy and the operator competent."

A power of observation is developed through long experience and from viewing a large number of films of varying multiplicity, the same as experience teaches the physician or surgeon by hearing through the stethoscope or by manual palpation, and for that reason only simple X-rays will not mislead the jury even if normals are shown by contrast.

In the case of a skull fracture or multiple fractures when experts cannot agree or in any difficult films one can apply an objection raised in one of the early cases, when the technical perfection was in its infancy. "It is argued" in *Miller vs. Dumon* (1901), 24 Wash. 648, 64 Pac. 804, "that the witness instead of being permitted to express an opinion that the bone of a leg was fractured, should have been confined to explaining what appeared upon the negative indicated a fracture, and leave it to the jury to determine from the negative whether these

appearances were there or not." This objection was overruled as the opinion formed was of the same nature as any medical testimony.

Judge Howard (*Marion vs. Coon Constr. Co.* [1915], 157 App. Div. 95, 141 N. Y. S. 647, affirmed 216 N. Y. 178, 110 N. E. 444) said "I do not think that the doctrine that an ordinary photograph is the best evidence of what it contains should be applied to X-ray pictures. They constitute an exception to the rule concerning ordinary documents and photographs, for the X-ray pictures are not the best evidence to laymen of what they contain. The opinion of the expert is the best evidence of what they contain—the only evidence."

In the case *Davis vs. Boston Electric Co.* (1920), 235 Mass. 482, 126 N. E. 841, a firearms expert testified that the object shown on a film, admitted as evidence, was the shadow of a bullet.

This is an example of a lay expert testifying that the film represents a true story of the existing condition but the testimony was limited to his field of knowledge. A person may be able to make an X-ray examination, that is a technician can produce films of diagnostic quality, but they may not be an expert witness when interpretation of the findings is considered. In the case *Liles vs. Hannah Pickett Mills* (1929), 197 N. C. 772, 150 S. E. 363, an X-ray film was offered as evidence and the judge expressed his willingness to admit the photograph provided expert testimony was introduced satisfactorily explaining it to the jury, but held that the witness who had made the film had not qualified himself sufficiently expert in questions of anatomy to testify. Upon this finding the testimony was properly excluded and upon appeal the finding was that no error had been committed. And along this same line of reasoning the late Chief Justice Wm. H. Taft said in *Ewing vs. Goode*, 78 Fed. 442 (1897), "When a case depends on a highly specialized art with respect to which the laymen can have no knowledge at all, the court and jury must be dependent on expert evidence—there is no other guide."

Although there have been numerous injuries and deaths to employees of hospitals and also to patients due to coming in contact with high tension wires leading to X-ray tubes, no record of any of these cases can be found in the courts. Evidently no action was started in any of these cases of acci-

dental electrocution but, nevertheless, such a happening in any laboratory presents the problem of liability, either through negligence in improper installation or in positioning the tube too near the patient.

The proprietorship of the films has been an oft discussed question but apparently has never been carried to the higher courts. Several quotations refer indirectly to the question, and one from a Massachusetts case says "there was undisputed evidence that the X-rays taken in the hospital, as these rays were, are considered hospital property; hence they are not taken except on order of the physician or surgeon, that the X-ray pictures are indexed and numbered as part of the hospital record, that from the pictures the radiologist makes findings in writing, which are a part of the X-ray laboratory records and held there as a part of the records of the hospital." In the absence of an express agreement the same question has arisen relative to photographic plates. Courts have held that the negative is the property of the photographer (*Corliss et al vs. Walker* [1894], 64 Fed. 280, 31 L. R. A. 283), subject to certain restrictions to its use. The disposition of the prints rests with the "sitter" and any exhibition of either prints or negatives invades "personal privacy." There must be proof of a definite understanding between the parties involved whether intermediate products are to be turned over to the one photographed. Resolutions adopted by the Radiological Society of North America expressed the sense of the society "That all roentgenograms, plates, films, negatives, photographs, tracings or other records of examinations are the property of the roentgenologist who made them or the laboratory in which they were made." The roentgenologist acts as a consultant and in obedience to the professional code of ethics is not to make known any findings or conclusions to the patients, relatives, friends or anyone directly or indirectly connected with the case other than the requesting physician. General acceptance by the profession of these principles and existing rules in many hospitals will go a long way if ever this question comes before the courts. When a patient presents himself for an examination he agrees to be examined in whatever way may be necessary to make a diagnosis and there is no reason to assume that he owns the films any more than there is reason to believe that he owns the dictating machine

cylinder the doctor used in making the report or to ask that his temperature chart be turned over to him when he is discharged from the hospital. Some laboratories have a rule, a copy of which is on their receipt, stating that films may be demonstrated to patients on written consent of the referring physician and are open to inspection to any reputable physician who may show a legitimate interest in the case, or subject to subpoena the same as any other hospital records.

A study of the Index of the American Legal Digest System will convince any one in a short time that not only do the malpractice cases increase in number each year, but each year a greater number involve the use of X-ray in some manner.

Strange though it may seem, the largest number of decisions in cases involving X-ray in court are to be found in the States comprising the Mississippi Valley, with Iowa, Minnesota and Illinois predominating. Geographical consideration must also be given to Texas as a large number of cases are recorded there. Very few cases are found, as would be suspected, in the industrial centers where perhaps the greatest number of accidents occur. This probably is explained by the fact that X-ray examinations have proven their worth in compensation claims. Then too, a large number of the suits are brought alleging that a "burn" has resulted by reason of treatment, and X-ray therapy is rarely indicated in industrial surgery.

A recent issue of Radiology, the official publication of the Radiological Society of North America, reproduces a series of suggestions issued by a company handling malpractice claims. These suggestions are worthy of note:

1. Make no admissions of liability on your part. Let your responsibility be determined by legal standards.

2. Refrain from making remarks about any other doctor's work. Without doubt this

is a common source of instigating malpractice litigation, and most such remarks are thoughtlessly made.

3. Keep accurate record of dates and nature of all treatments rendered.

4. The importance of X-ray examinations in the diagnosis of any possible bone injury, and before and after reduction of fractures, cannot be over-emphasized. It is becoming increasingly difficult to defend such cases without full X-ray records.

In conclusion it may be said that it is obvious that by "exercising the ordinary care, skill and diligence to be expected of one of the medical profession" the operators of X-ray machines and physicians and surgeons in general can certainly lessen the number of cases involving any of the legal aspects of X-ray.

NOTE: This article has been made as brief as possible and yet every effort has been made to incorporate all questions involved. While only those cases best bringing out the point desired are quoted, many similar decisions can be found. Inclusion of a great number of legal references was purposely avoided so as to treat the subject from a medical viewpoint instead of from the legal side.

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INFARCTS OF CARDIAC ORIGIN*

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Thrombosis in the circulatory system is the primary factor in the production of infarcts, the occurrence of which is always a serious chapter in medical experience. The surgeon has many of his apparently most promising cases snatched away from him at most unexpected moments. The internist who deals with many cardiac cases also meets with this serious complication when least expected.

Many surgical patients die suddenly of pulmonary embolism resulting from thrombosis located in veins leading from the surgical field where stasis of the blood stream or injury to the veins has occurred as a result of surgical manipulation. Included in the surgical cases are many that entered the operating room with cardiac pathology. In these cases the strain on the heart from shock and after-effects of a major operation may induce the formation of thrombi in one or another of the cardiac cavities from which emboli enter the pulmonary or systemic circulation, according to location. The internist meets thrombosis and its subsequent accidents in certain types of advanced cases of cardiac pathology which we will attempt to describe. This study will not include coronary thrombosis.

Post-mortem statistics strongly suggest that the greater percentage of infarcts are of cardiac origin. The next most common location of thrombosis is in the first portion of the aorta. P. Bull¹ of Oslo has no doubt made the most extensive study of location of thrombi and the distribution of infarcts in recent years. He reports the occurrence of 181 infarcts of extremities found in 6,140 autopsies. Thrombosis was found in the right heart 67 times, in the left heart 63 times, and in both sides 51 times. The relative frequency of thrombosis in both sides of the heart explains infarcts in both pulmonary and systemic circulation in the same individual. The right auricle was most frequently found to be the seat of thrombosis, then the left ventricle, left auricle, and last the right ventricle. Thrombosis on the valves was demonstrated in 73 out of 6,140 examinations. The aorta is another important seat of thrombosis and occasionally some of the smaller arteries, but in 243 cases of thrombosis only 9 were found in the aorta and nearly all of these on advanced atheromatous patches. Thrombi in pulmonary veins were found only three times in the series and then only in connection

with thrombotic matter in the left auricle. Emboli in the peripheral circulation were often complicated with emboli in other organs such as lungs, kidneys, spleen, brain and intestines. There is a possibility of thrombus in either side of the heart producing infarcts in both pulmonary and peripheral circulation when a patent foramen ovale exists. These cases are, of course, very rare. In general, it is important not to fix the attention exclusively on the infarct in the peripheral vessels but to regard this as nothing but a link in a chain of emboli in other organs that may have occurred before or after the embolism in the periphery.

The extensive study in thrombosis made by Bull shows us the necessity for bearing in mind that the most fertile field for thrombosis is in the heart. This is further confirmed by Bannowitch and Ira² who find that emboli and thrombosis of abdominal aorta are usually cardiac in origin.

There are two types of emboli originating in the heart. First, small mycotic vegetations associated with endocarditis; second, a large type that develop where circulation is retarded or stagnant, as in auricular appendages, apices of the ventricles, and between the columnæ carni. On rare occasions a peculiar ball thrombus is found, always in the left auricle and associated with mitral stenosis.

ETIOLOGY

The cause of thrombus formation is not clearly determined but various conditions and combinations of circumstances are mentioned. First, it is believed that blood platelets are the nucleus of a thrombus, the theory being advanced that some injury to the endothelial surface of the heart or vessel causes an accumulation of platelets and, with this, thrombus-forming change takes place in the blood and we have the begin-

*Read before the 109th Annual Meeting of the Michigan State Medical Society, Jackson, Sept. 17 to 19, 1929.

ning of what may be a death-dealing formation. The question is not entirely settled as to whether this injury to endothelial surfaces may be due to physical means or to the effect of bacteria or their products in the blood stream. Stasis in the blood stream is referred to as at least a predisposing factor because thrombi seem to form where for any reason the blood flow is retarded in veins by valves or otherwise, or in the appendages of auricles or apices of ventricles where stagnation is apt to occur. Where thrombi form in the heart, cardiac pathology nearly always exists, such as endocarditis, myocarditis, associated with various stages of decompensation or unusual cardiac activity and frequently auricular fibrillation.

An attempt will be made to bring to you an idea of the types of cases in which thrombosis and resulting emboli are apt to occur, by reporting four cases that impress us as the kind in which thrombosis and infarcts are to be expected.

REPORT OF CASES

Case 1.—Mr. J. B. P. Age 21. No. 191499. Student.

Family history negative. Previous history negative except for tonsillitis five years ago. Present illness began with rheumatic arthritis with slight fever. Came to institution primarily to have tonsils removed. Temperature ranged from 99.6 to 101.4. Secondary anemia was found. Tonsils large and spongy. Heart enlarged, mitral stenosis with regurgitation. In spite of rest and usual care, irregular fever persisted. Blood culture negative. No leukocytosis. Occasional chills with an increase in fever. *Diagnosis:* Endocarditis lenta.

About ten days after entrance, showers of emboli with resulting petechia developed. These showers became more frequent and in course of time involved conjunctivæ, mucous membranes of mouth, meninges and retina, and finally hemorrhages and thrombosis into the base of the brain and cerebral ventricle causing death. Here the emboli were of the first type and originated from the endocardium, valves being covered with vegetations. The unusual feature of this case was the development of thrombosis and hemorrhages into the right eye that were soon followed by more extensive thrombosis and hemorrhage into the brain.

Case 2.—Mr. B. J. N. Age 55. Real Estate. No. 143854.

Family history negative. Previous history negative except for frequent tonsillitis and finally rheumatic fever and myocarditis. Heart very easily embarrassed from minor exertion. Auricular fibrillation developed with the cardiac change. Last illness began with rheumatic arthritis, mild fever and evidences of decompensation. Rest and small doses of digitalis resulted in considerable improvement as far as decompensation was concerned. Temperature soon became normal. Cardiac pain was much less. Patient was permitted to be up and about the room. At times heart action was tumultuous, and fibrillation persisted. Because of this, digitalis was given rather persistently in moderate doses. Quinidin sul-

phate was not used. One day when up and about his room feeling better than usual, he suddenly felt a prickling sensation in left hip which rapidly extended down the leg, followed by numbness and pain. The numbness finally limited to the area just above the knee down and pain below the knee. Limb was cold, became mottled, result of an embolus in the anterior tibial artery, finally resulting in limited area of gangrene as seen in Figure 1. Amputation was done a few weeks later, and patient lived some weeks after this.

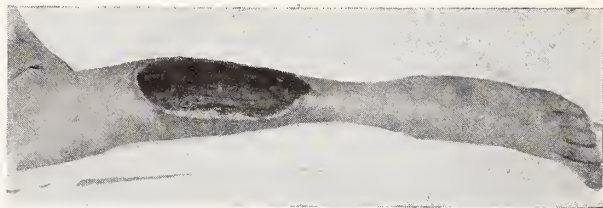


Fig. 1. Infarct into left anterior tibial artery with resulting gangrene.

Case 3.—Mr. M. J. T. Age 63. Case No. 189890. Real Estate.

Family history negative except mother died of cardiac disease. Previous history negative. Enjoyed excellent health for more than 33 years without illness. Chief complaint: Rheumatic pain in shoulders and arms and found to have chronic tonsillitis, obesity and hypertension. Habits sedentary. In six years he again presented himself and this time his chief complaint was dyspnea on very slight exertion and precordial pain, radiating into back and arms. Examination reveals blood pressure 150/90, cardiac hypertrophy, muffled heart sounds, second aortic accentuated, no murmurs or irregularities, some pretibial edema. Blood and urine findings negative. Rest and 15 minims of digitalis t.i.d. resulted in improvement of all symptoms, but cardiac efficiency still limited. Patient continued rest program with digitalis almost continuously for about a year at home. Omitted digitalis one or two days every week or ten days. A year later patient presents himself and reports condition fair for six or eight months after previous visit. The last few months dyspnea has been much worse in spite of a great deal of rest and digitalis. Auricular fibrillation had developed and persisted under digitalis, even with pulse rate in the neighborhood of 60. Decompensation had increased. Blood pressure 145/90. Cardiogram revealed inverted T wave and auricular fibrillation. The inverted T wave may be due to the prolonged use of digitalis. Patient was again put to bed, rest induced at night by 1/12 grain of heroin for a few nights, then veronal was given. Pulse ranged from 50 to 66. On the sixth day, experienced sudden numbness of toes of right foot, soon followed by pain in leg below knee with marked pallor and lower temperature in this part of the leg. An attempt was made to relieve the patient by arterial sympathectomy, hoping to avoid amputation, but thrombosis of the tibial artery was discovered. Patient did not survive the effects of the anesthesia and surgery, dying a few days later. Autopsy did not positively reveal the location of the thrombosis, but in view of the fibroid heart and fatty degeneration and coronary sclerosis, we are inclined to believe that it is cardiac in origin.

Case 4.—Mr. E. S. G. Age 53. Banker. No. 205975.

Family history: Father died of chronic Bright's disease and diabetes, otherwise negative. Habits sedentary. Previous history: No serious infection except pneumonia at 30 years of age. Obese for years prior to present illness owing largely to over-indulgence in food and lack of exercise. Chief com-

plaint: Shortness of breath, abdominal distension, constipation. Examination: Obesity, most marked over the abdomen. Expression is anxious, marked dyspnea on reclining, slight cyanosis, chest emphysematous with limited expansion. Percussion gives good resonance, auscultation reveals breath sounds harsh, congestion at the base of both lungs. Râles heard occasionally. Apex not visible but barely palpable in the mid-clavicular line. Cardiac dullness fully 10 cm. to the left and 3 cm. beyond the right

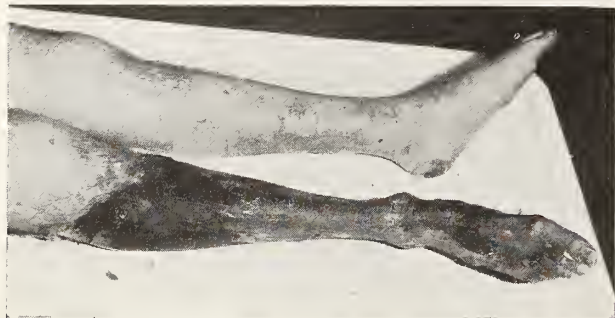


Fig. 2. Extensive gangrene, result of occlusion of lower portion of femoral artery. Some infarcts of the other leg.

sternal border. Heart sounds muffled, no murmurs, second pulmonic greater than second aortic. Blood pressure 105/85, pulse rate 110. Some edema of the lower extremities. Abdomen distended. Liver dullness increased, 5th intercostal space to two inches below the costal margin, and tender to palpation. Urine showed traces of albumin, no casts. Blood count normal. Wassermann test negative. Moderately increased non-protein nitrogen (40.5), uric acid 6.4, blood sugar 120. X-ray of the chest revealed enlargement of the heart 35%, basal congestion of the lungs. Rest in bed or in a comfortable chair, digitalis in rather vigorous doses in the beginning, codein during the day and heroin at night failed to lower the pulse rate or lessen the dyspnea. Salines given for abdominal distention. Liver increased in size and tender at the end of three weeks. Heart action still tumultuous and decompensation still evident. While resting quietly in a chair after lunch he developed a severe pain in the right leg and on examination was found to be cold and cyanotic with numbness of the leg. Morphine had to be used freely for pain and gradually demarcation of infarct developed and finally gangrene of the right leg as shown in Figure 2. The first infarct was followed by smaller ones in the upper branches of the femoral, and some in smaller vessels of the left foot, the most marked infarct being about the heel. The heart remained tumultuous with pulse 120 or more. Pulmonary congestion gradually increased and prostration rather extreme. With morphine and absolute rest and small doses of digitalis, the patient lived 27 days after the infarction occurred.

DISCUSSION OF CASES

These cases have been reported somewhat in detail as far as circulatory findings are concerned in order to give an idea of the type of case and symptoms and behavior of the heart leading up to thrombosis and embolic infarction.

In Case 1, autopsy revealed the origin of emboli in the heart. In Case 3, the location of the thrombus could not be absolutely determined, but the suspicion was that it was

located in the left ventricle. Cases of bacterial endocarditis practically always produce showers of emboli that originate from vegetations and clumps of bacteria from valves and adjacent endocardium and are of great diagnostic importance. Once in a while murmurs are absent in this form of endocarditis and in such cases it has been found that the endocarditis is located at the bases of the valves, not extending to edges of the cusp. Either mitral or aortic valves are the most frequently involved and often both. The other cases depict the chronic myocardial degenerations, resulting in gradual failure of cardiac efficiency with increased decompensation. Thrombosis develops from the blood stasis in certain parts of the cardiac cavities and perhaps also because of degeneration of endocardium due to extension from the myocardial disease.

MANAGEMENT

In the way of prophylaxis, it is well to bear in mind that there are certain types of cases that are apt to develop thrombosis in the heart or beginning aorta with consequences as already outlined. If by intuition, experience or otherwise, we can anticipate such possibilities, then we should be very insistent on absolute rest as the main therapeutic hope, so that a thrombus may undergo as complete organization as possible. In cases in which the heart remains tumultuous, with evidence of decompensation, the patient should be urged to rest in bed until these symptoms subside. The rest in bed for a considerable period will favor a complete organization of the thrombus. Even with some decompensation, large doses of digitalis should be avoided, because with vigorous cardiac contractions, emboli are apt to be broken off. Moderate digitalis therapy is in order and may add to the patient's comfort. This applies especially to cases of auricular fibrillation. We are often tempted to give quinidin to the patient with fibrillation, but with a history of decompensation and the associated degeneration of the myocardium, the use of quinidin appears rather futile and dangerous. In cases of rheumatic heart with mitral stenosis, and limited cardiac efficiency, quinidin should be used with great caution. If a thrombus is located in the cardiac cavities and particularly in the auricles, then with the establishment of normal rhythms the contraction of

the myocardium becomes more complete and emboli are more apt to be distributed.

In the case of infarction, the treatment must be symptomatic and vary according to the location of the organ involved. Shock must be cared for in the usual manner and cardiac stimulation instituted according to conditions. Heat must be used to maintain temperature of the tissues, in hope of collateral circulation being established, thus limiting the extent of gangrene. For the gangrene, the best procedure in my experience is to keep the area covered with gauze or cotton saturated with alcohol. This prevents infection and softening of tissue and results in a very dry form of gangrene. It also eliminates absorption of any product of putrefaction better than any other means, and unpleasant odors from the dead tissue.

In case the location of the embolus can be determined within a few hours of the infarction, embolectomy should be considered. When done early it may prevent gangrene. If the gangrene in the extremity is at all extensive, amputation becomes necessary.

SUMMARY

1. The greater percentage of infarcts are of cardiac origin, thrombosis occurring in the heart in the following order of fre-

quency: (1) right auricle; (2) left ventricle; (3) left auricle; (4) right ventricle. Thrombosis in either side of the heart may produce infarcts in both pulmonary and peripheral circulation when a patent foramen ovale exists, but these cases are rare.

2. The three types of emboli originating in the heart are (1) small mycotic vegetations associated with endocarditis; (2) a large type of emboli that develop where circulation is retarded or stagnant, as in auricular appendages, apices of ventricles, and between columnæ carni; (3) ball thrombus, which is rare and always in left auricle and associated with mitral stenosis.

3. Blood platelets are believed to be the nucleus of a thrombus, an accumulation of these being caused by injury (bacterial or otherwise) to endothelial surfaces. Stasis in blood stream is a predisposing factor, and cardiac pathology nearly always precedes the formation of thrombi.

4. Types of cases in which thrombosis and emboli are liable to occur are discussed, and management of cases outlined.

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OBSERVATIONS ON THE MALIGNANT MELANOMA*

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A critical review of 27 cases of melanotic growth of the skin has been undertaken in this paper because of the present inadequate methods used in the treatment of many cases and in an endeavor to outline a surgical plan for better results.

The term melanoma, which specifies the character of the tumor cell containing a variable amount of an iron-free pigment, melanin, will be used in an endeavor to show no partiality as to the connective tissue, epithelial or endothelial origin of these growths.

The malignant melanoma has its origin as a rule from the nevus cells of pigmented warts and moles. The benign melanoma or pigmented nevus consists essentially of a localized area of pigmented basal cells, with the presence of so-called "nevus" cells arranged in groups or columns in the upper corium.

The malignant tumors have so varied a histological structure that melano-sarcoma, carcinoma, endothelioma and perithelioma are described and in many instances marked variation of cell type may be found in the same tumor.

The pigment, melanin, is produced by the specific mesoblast cell, the chromatophore, a star-like, dendritic cell. There is more or less general agreement that it is a product of a special metabolic function of the cell, secretory or otherwise, by which the protein material brought to the cell is converted into pigment by means of an enzyme. It has been suggested by many writers that the presence in the skin of an abnormal amount of pigment makes the epidermal or mesodermal cells unstable; so that when the

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pigment further increases malignancy starts.

It may be said that the majority of malignant melanoma have their origin in pre-existing simple or benign moles. In the series of cases being described, twenty-one of the twenty-seven cases had their origin in the blue-black mole or nevus.



Fig. 1. Region metastasis

That the lymph glands may be the primary site of the disease without skin lesion seems to be borne out in a limited number of cases in the literature.

Eve records two cases of malignant melanoma arising in the scars of puncture wounds which Handley explains as being due to the traumatic implantation into the subcutaneous tissues of a group of dermal-connective tissue cells; of actual or potential chromatophores.

A case in this series illustrating the origin of melanoblastoma in a puncture wound (Fig. 1):

Mr. J. B., age 42 years, paperhanger. For 20 years the patient had carried long scissors at his side in the paperhanging business and had frequently pricked the calf of his right leg with their points. 1 year ago he noticed a small black speck at this site on the calf of the leg. This increased in size and attained the proportions of half an orange, bleeding easily on slight trauma. Examination revealed an orange-sized tumescence over the right calf with color varying from purple to blue-black and with the surface partly eroded. The right inguinal glands were enlarged and palpable. Excision of the primary with resection of the inguinal glands was done and the pathological diagnosis was that of melanoblastoma with metastasis to the inguinal glands.

On histological examination of the malignant melanoma Borst describes three varieties of structure: (a) those consisting of slender spindle cells, the ends of which are continued into very long branching processes; stellate, round and oval cells are often also present; (b) those consisting of spindle-shaped cells arranged in intercross-

ing bundles. In cross section these growths present an alveolar appearance. (c) Those consisting of large cells, round, oval or polygonal in shape, arranged in alveoli separated by strands of connective tissue. The distribution of pigment may be very irregular. The whole growth may be a deep coal-black, it may be only partially pigmented or entirely colorless. This irregularity in pigment distribution has been especially noted in the metastases. The primary skin lesion may show an abundance of deep pigment while the nearest lymph glands draining the area may be without pigment.

That moles, birthmarks and warts of congenital origin may remain benign and unnoticed for years only to undergo malignant change later, presupposes an exciting factor. Undoubtedly this factor in the majority of cases arises as a chronic irritation. Eleven of the cases of this series give a definite history of irritation. Yanagiva and Tchikawa succeeded in producing cancer on the ears of rabbits by protracted painting with tar. Russell (1923) stated that the experimental production of cancer can now be carried out with a considerable measure of success by two methods: The one by the irritation of chemical compounds as yet not isolated, of tar, and the other where cancer is induced by the irritation set up by the presence and products of gross parasites such as the artificial infection of the rat's stomach with a nematode; in both cases the principle is essentially the same, the induction of chronic irritation.

Some writers regard the melanin pigment in the light of a chemical irritant which may first produce an abnormal epidermal cell proliferation and Borst and others hold that it is set free in the tissue spaces and sets up a malignant proliferation in the endothelial and connective tissue cells.

Irritation in the form of mechanical trauma from clothing, scratching, friction and chemical applications may act as the exciting factor in producing the change from benign to malignant growth. That the presence of a congenital nevus or birthmark is not essential is evidenced by the reported cases of the development of malignant melanoma in puncture wounds, e.g., from a thorn in the foot, especially in the races of the upper Nile.

In the study of this series of cases one is strongly impressed with the rapidity of malignant change, recurrence and rapid re-

gional and general metastasis incident to treatment, previous to observation; such as biopsy, cauterization with the electric needle, actual cautery, chemicals and inadequate excision.

The following cases illustrate the effects of treatment of the melanoma by electrocoagulation (Fig. 2):

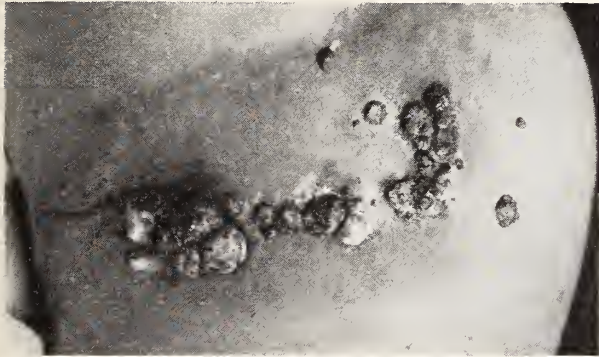


Fig. 2. Local recurrence at site of previous operation.

Mrs. A. W., age 41 years, housewife. A birthmark had been present in the lower left flank of a brownish black color which was constantly irritated by the clothing. Increased to the size of a hen's egg and removed 13 months before entrance with the electric needle. Shortly following this removal a lobulated black mass appeared at the site and enlarged to the size of her fist. Nine months previous to admission this mass was excised and 2 months later similar small black tumors presented themselves along the entire line of the incision. Patient received two X-ray treatments and 2 months before admission a small bluish tumor was noted in the left breast, with several in the left groin. Examination revealed a group of lobulated nodules ranging in size from pinhead to hen's egg, bluish, red and black in color, exuding a slight purro-hemorrhagic discharge, soft to hard in consistency along a healed 10 inch incision in the left flank and extending on to the abdomen, toward the umbilicus. The lymphatics of the left inguinal region were of olive size and firm to palpation. In the lower quadrant of the left breast was a walnut-sized, firm mass with bluish translucence through the skin.

Mr. J. A., age 62 years, farmer. In June, 1928, small lump noted just above the outer epicondyle of the right humerus at the site of a pigmented spot which had been present for years. Patient scratched this nodule so that it increased in size and bled. It was removed with the electric needle, shortly following which two small black spots were noted at the site. The tumor mass recurred and was excised in February, 1929. He was given several X-ray treatments over this area as well as the axilla and 2 months before admission noted a swelling over the medial upper arm and a second swelling in the right axilla. The epitrochlear and axillary glands resected on 8-20-29 with a pathological diagnosis of melanotic sarcoma.

Mr. G. W., age 51 years, postal carrier. Several years ago noted a small brown papule on the chest just to the right of the sternum which recently had grown very rapidly in size and turned black in color. April, 1928, it was removed with the electric needle and 2 months later a mass appeared in the right axilla. The axillary glands were resected with a pathological diagnosis of melanotic sarcoma.

Mr. B. C., age 57 years, hotel proprietor. Tumor mass on the pinna of the left ear present since 1925. Removed twice in 1927 with the electric needle with a recurrence each time. Examination revealed a black tumor mass $2 \times 1 \times 1\frac{1}{2}$ cm. on the posterior pinna of the left ear. Excision with the endotherm knife with a pathological diagnosis of advanced melanotic sarcoma.

When a congenital pigmented wart or mole which for years has shown no change

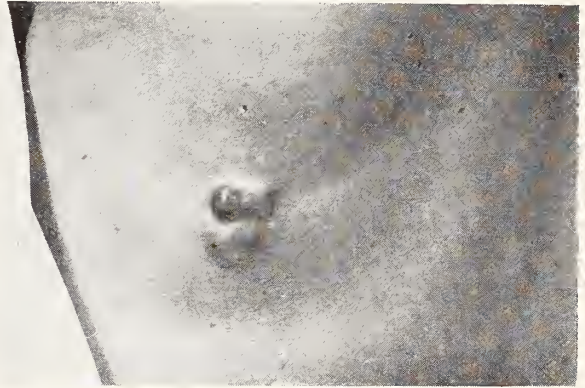


Fig. 3. Malignancy arising at site of mole

begins to enlarge, bleed, discharge and ulcerate it should be treated as a malignancy. To wait for regional glandular involvement in an endeavor to settle the diagnosis is to court disaster (Fig. 3).

Mrs. G. K., age 36 years, housewife, malignant melanoma of the neck. August, 1927, a small black mole present since birth was removed from the back of the neck by means of the electric needle. Eight months later swelling occurred in the scar and in June, 1928, was as large as a marble. Three X-ray treatments were given and the growth excised, as well as another mass on the left side of the neck, which had recently appeared. Four weeks before admission there was onset of shooting pain in the left leg with nausea, vomiting, and pain in the abdomen, back and shoulders. There was some hematemesis; stools had also been tarry. Physical examination revealed a pale female, well nourished, with tenderness over the right breast, right upper quadrant and left inguinal region, with a questionable mass in the right upper quadrant. There were nodular masses beneath the scars of excision in the neck. X-ray examination of the chest showed an adventitious shadow in the left hilum suggestive of a metastatic condition. Pelvic X-ray showed some mottling of the left ischial and pubic rami suggestive of metastasis.

Autopsy findings and pathological diagnosis: Recurrent melanoblastoma in the skin of the neck; generalized melanoblastomatosis, chiefly amelanotic, in the meninges of the brain, spinal cord, skull cap, vertebra, ribs, skeletal muscles, thyroid, heart, lungs, spleen, pancreas, liver, kidneys, adrenals, ovaries, uterus, all lymph glands. Acute exacerbation of chronic passive congestion, atrophy and parenchymatous degeneration of all organs.

In order that the treatment of these very malignant growths may be better understood it is imperative that there should be a clear knowledge of their mode of metastasis. The lymphatics of the skin are collected from very fine capillaries in the epidermis

in lymphatic trunks, lying both in the sub-epidermal tissues and into larger trunks in the fascial planes, which eventually terminate in regional lymph nodes. It has been shown by Campbell de Morgan and later by Handley that the growth of melanoblastoma occurs first along the lymphatics. This per-



Fig. 4. A. Epidermis with primary melanoma G; B. Corium with blood vessels F and superficial lymphatics E; C. Fascial lymphatic trunk; D. Muscle.

I. Zone furthest from primary with melanotic cells entirely within fascial plexus C.

II. Zone—Fewer melanotic cells within fascial plexus; perilymphatic leukocytosis I and fibrosis of lymphatics; permeation of superficial lymphatics E toward epidermis in corium and in muscle.

III. Zone nearest primary—Complete fibrosis fascial lymphatic plexus; invasion of vessels J with melanotic cells; groups of melanotic nodules H free in corium and muscle.

meation of the lymphatics is largely a mechanical one, the spread of the tumor cells occurring along the line of least resistance. Handley, after extensive investigation, has described three zones surrounding the primary lesion (Fig. 4). Farthest from the lesion in the fascial lymphatic plexus only with no invasion of the surrounding tissues are found the tumor cells entirely within the walls of the lymphatic vessels. Within this zone is an area of inflammatory reaction with peri-lymphatic leukocytosis and fibrosis due to rupture of distended lymphatics of the fascial plexus with melanotic tumor cells as well as a permeation of the sub-epithelial tributary lymphatics toward the skin and invasion of the fascia and muscles. Nearest the primary growth is a zone in which all of the permeated lymphatics have become strangulated by the peri-lymphatic fibrosis incident to the inflammatory reaction set up by the tumor cell's presence and as a result the lymphatics have entirely disappeared, leaving only isolated large nodules of cancer, increasing in size and invading the neighboring vessels, both veins and arteries, by secondary extension. Careful histological examination of the lymph glands draining a primary area presents the identical three zones. That blood vessel dissemination occurs secondarily to lymphatic permeation is thus clearly shown. For a complete understanding of the mode of metastasis, it should be noted that a melanoblastoma may originate near the line of demarkation

in an area drained by two different sets of glands, as the groin and axilla. These cases of necessity require a more radical surgical procedure.

A careful study of the cases of either benign or malignant melanoma treated by means of the electric needle discloses a 100% recurrence at the site of the primary, with early regional and generalized metastasis in the majority of cases. That this form of treatment is not only inadequate for removal of the neoplasm but is also most effective in bringing about rapidly metastasizing malignancy, is now certain. The exact modus operandi by which this form of neoplasm is stimulated to metastasis by this form of treatment is not entirely clear.

A crucial point to be settled in the surgical treatment of the melanoma is to determine at what stage in its progress the malignancy leaves the lymphatics and becomes disseminated in the blood stream. Let it be said that once the neoplastic cells are launched into the blood stream, the prognosis is hopeless. This point of blood dissemination has been variously estimated, but from a review of the cases in this series it has been placed at 11½ months from the time of onset of malignant changes in the primary. The average duration of the disease has been variously stated to be 3 years.

That a rapidly metastasizing melanoblastoma with primary origin unknown may lead the physician or surgeon into pitfalls as to diagnosis and surgical procedure, will be readily seen in the following case history:

Mr. J. R., age 56 years, miner. Onset of illness, September 27, 1926. Felt chilly, feverish, drowsy and nauseated. Awakened the same night with severe pain in the right upper quadrant of the abdomen, radiating to the right shoulder. Hypodermic given for relief. He became weaker and a diagnosis of cholelithiasis was made. Operation revealed a normal, slightly dilated gall bladder. On leaving the hospital, patient began coughing up large amounts of frothy sputum with vomiting and pain in the left chest and a loss of 28 pounds in weight. Six weeks previous to operation patient had noticed a lump in the left axilla which rapidly attained the size of an orange. Roentgenogram of the chest revealed both lungs to be filled with metastatic masses of malignancy. Biopsy of the axillary mass revealed very malignant, rapidly growing, non-pigmented melanoblastoma. Unfortunately, the patient desired to go home and autopsy could not be obtained to determine with assurance the origin of the primary in this case.

The operation for removal of the primary malignant growth is based upon the anatomical disposition of the lymphatics and spread of the neoplastic cells heretofore described. A wide circular or elliptical incision should

be made at least an inch away from the growth in healthy skin. The surrounding skin is then elevated for a distance of about two inches; if necessary, radial incisions from the first can be made to facilitate the procedure. The subcutaneous fat and fascia is then incised at the extreme base of the undercut skin in a circular manner down to the underlying muscle. The entire mass of primary, subcutaneous fat and fascia with a thin portion of the underlying muscle is then removed by sharp dissection. It is necessary during the same operation to remove the regional lymph glands whether palpable or not. It should be advised at this juncture that should the regional glands be palpable at time of operation, removal of the gland-bearing area should be carried out in the same manner as for removal of the primary, inasmuch as Handley has demonstrated the same lymphatic dissemination around the glands.

Far more important in the treatment of this most malignant of diseases is the attack before malignant change has occurred. The benign pigmented mole, the source of trouble in the majority of cases, must be eradicated. Although electrocoagulation or desiccation may often be adequate it leaves behind in a sufficient number of cases, as evidenced by this report, irritated nevus cells which initiate malignancy.

The procedure of choice is the removal of the entire mole by excision with the knife or endotherm. A wide elliptical incision surrounding the mole should be made at least .6-1 cm. away from it in healthy skin. The incision is deepened and a portion of the subcutaneous fat excised in such a fashion that the mole, surrounding healthy skin and subcutaneous fat are removed in toto. The edges of the wound may then be undercut if necessary in order to close it without tension.

SUMMARY

1. Most malignant melanomata arise in congenital moles or birthmarks.

2. Chronic irritation is usually responsible for the malignant change.

3. The prognosis for cure after regional metastases have taken place is grave.

4. Treatment of the benign or malignant melanoma by the actual cautery, electrocoagulation, desiccation or chemicals is often inadequate.

5. Blood dissemination follows lymphatic permeation in the metastases of melanoblastoma.

6. The average time for the metastatic cells to enter the blood stream following malignant change in the primary is 11.5 months in this series.

7. Wide excision of the malignant melanoma with 1 inch of healthy skin, wider excision of subcutaneous fat, fascia and superficial muscle and resection of the regional lymph glands is the operation of choice and offers the best prognosis.

8. Complete excision of benign moles through healthy skin and subcutaneous fat as a prophylactic measure against malignant change.

A careful study of the 27 reported cases receiving treatment at the University of Michigan Hospital reveals the following facts:

1. Males—18
2. Females—9
3. Average age—46.9 years.
4. Oldest—75 years.
5. Youngest—25 years.
6. Presence of mole—21 cases
7. Number with primary origin unknown—2
8. Primary in the eye—3
9. Primary in the nasal septum—1
10. Definite history of irritation—11
11. History of previous treatment with electric needle—5
12. History of previous excision—9
13. History of previous X-ray treatment—6
14. Those showing regional metastasis—14
15. Those showing general metastasis—11
16. Average time of regional metastasis—5 $\frac{1}{7}$ months
17. Average time of general metastasis—11 $\frac{1}{2}$ months
18. Recurrence at site of removal—9

BACKACHE AS A GYNECOLOGIC SYMPTOM*

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That backache is a common complaint of women as a group, is too evident to demand proof. Fairbairn¹ has stated that with the exception of headache, backache is the most common symptom of the tired woman. Furthermore, no one will deny that gynecologic conditions are the direct cause of backache.

These facts need no elaboration, and this paper aims not to prove them, but to emphasize that gynecologic pathology need not cause backache, and also that operative correction of pelvic abnormalities often fails to bring about the desired relief.

So much emphasis has been placed upon diseases of the pelvic organs as etiologic factors of this condition, that there is a marked tendency to diagnose all backaches as gynecologic, especially if a pelvic examination shows any evidence of pathology. This has been brought to our attention so forcibly at the University Hospital, that it is felt that a few words on this subject ought to be of value. Hardly a day passes without seeing a patient who has been sent to the clinic for operation for the relief of backache, because of some pelvic pathology, most commonly retroversion. On examining these patients abnormalities of the pelvis are found, but in many the cure rests, not in pelvic operation, but along totally different lines.

Backache of gynecologic origin is usually sacral in type, less frequently lumbar, and is always central. This anatomic localization does not seem to be generally recognized. Many patients are seen with high dorsal pain as well as one-sided symptoms, who have previously been considered as gynecologic. This anatomic grouping is also an aid in ruling out genito-urinary causes, as they too are usually not central.

Diseases of the spine itself due to trauma, faulty posture, congenital abnormalities, acute and chronic arthritis, and malignant disease (Allison²) offer the most difficulty in diagnosis. Time does not permit a thorough discussion of the differential diagnosis of these conditions, but if in doubt a consultation with an orthopedist is certainly indicated, before a pelvic operation is suggested as a cure.

Imperfect posture is an extremely common cause of low central backache in women. Goldthwaite³ has classified postures into three groups: the normal textbook individ-

ual, the congenital visceroptotic or the carnivorous, and the herbivorous. He further states that individuals of the normal group are seldom found among those who have chronic diseases. In parallel with this is the fact that those of carnivorous or herbivorous stature are those who most often complain of backache.

The carnivorous type may be briefly classified as individuals with narrow epigastric angles, more slender bodies than the normal, the lumbar vertebræ are often of the dorsal type, and six in number. The spine as a whole has a greater range of motion than the normal, due to the relatively short transverse processes with their flat articular surfaces. These individuals usually have a profuse distribution of hair, and have heads of the dolichocephalic type, with narrow faces and prominent ears. Their abdominal organs have weaker attachments than usual and tend to be found considerably lower than is usually considered to be anatomically correct. The scapulæ are apt to be prominent. There is a greater lumbar curve and a forward inclination of the pelvis. With this congenital handicap, it is not strange that this group readily develop poor habits of posture, and the already present abnormalities become exaggerated. With a general lowering of the abdominal viscera the pelvic organs likewise share in the malposition, the normal deflecting planes of intra-abdominal pressure are changed and the joints of the lower back are put under unusual strain. This will be true whether the pelvic floor is relaxed or not. The visceroptotic type most commonly have lumbar backache.

The other congenital group is the herbivorous one. These individuals are usually of heavy bony structure, with excessive adipose deposits. Their epigastric angles are

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wide, their heads are round, their hair scant. They are solid in contrast to the flabby condition of their carnivorous brethren. All joints are heavier, the lumbar spine is extremely broad, the anteroposterior diameter of these vertebræ is much less than the transverse. The transverse process of the last lumbar vertebra often articulates with the upper portion of the sacrum, resulting in a diminution of lateral motion. The lumbar spine has a smaller anterior curvature than the normal, the pelvic inclination is less. It is this type that most often have severe symptoms from pelvic relaxations, undoubtedly due to the heavier duty to which the pelvic floor is subjected. These people, if they have backache, usually have the sacral type, and almost uniformly have congenital retroversion.

Sturmdorff⁴ states, using as an index the depth of the lumbar curve as measured from its lowest point perpendicularly, to a ruler placed in close apposition to the most prominent portion of the sacral and dorsal spine, that from an index "from 25 millimeters down, the existence of congenital retroversion, may be positively predicted in nearly every case prior to its bimanual verification."

Ward⁵ has stated "that in backaches due to gynecological disease, pelvic congestion, however produced, is a predominating factor," and Miller⁶ at about the same time pointed out that pelvic congestion itself is often the result of faulty posture associated with poor muscular tone. Therefore, we are not arguing with the exponents of congestion as an important causative factor for backache; rather we agree in believing that faulty posture has caused or helped to cause this congestion.

If posture plays such an important rôle in causing backache, why not attempt to treat it intelligently with suitable exercises and supports, even in the presence of abnormalities of the pelvis?

It is not unusual to see cessation of backache following an operation for repair of pelvic pathology, which was evidently not of etiologic importance. The explanation lies, not in the fact that the pelvis was responsible, but in the fact that fatigue is a common cause of backache, and that this fatigue had been decreased by the rest necessitated by the operation. Fatigue likewise is much more likely to reach pathologic proportions

in the individual with poor muscular tone and posture.

There is another common finding in women, so common that it is easily neglected, namely constipation. This has been so thoroughly dragged into every discussion that I hesitate to mention it. However, from a mechanical standpoint we cannot overlook it entirely; for in addition to backache it can cause pelvic abnormalities such as retrodisplacements or even accentuations of rectoceles. Shall we repair this pathologic condition with the hope of relieving the symptom under discussion? Many such attempts have been made with universal failure. To further illustrate the failure in considering all cases as gynecologic, the following case reports are given.

Mrs. J. R., age 28, mother of one child, entered the hospital because of backache, which has been present for many years. One year before, she had been operated for retroversion without relief of symptoms. She feels that the operation has been poorly executed and blames this for a continuance of her symptoms. Examination reveals that the operative result is excellent, that the uterus is in its normal position, and that the pelvis is negative. Postural examination revealed a typical carnivorous stature, with a lumbar index of forty millimeters. This condition had been present at the time of her operation, but had been overlooked. Relief for this patient was along postural lines entirely.

A second case, which illustrates another common type, was that of a young unmarried woman, Miss D., 25 years of age. She entered the hospital with a letter from her doctor, saying that her complaint was pain in the sacral region, and requesting a tonsillectomy and correction of a retroversion. Examination revealed septic tonsils which were removed; a small infantile retroverted uterus; and a lumbar index of twenty-seven millimeters. X-rays of the spine showed a sacralization of the last lumbar vertebra, with an articulation between the transverse process on the left and the sacrum. Here too, postural therapy and not pelvic operation offered relief.

What then can be our safest method of approach? What method will give the greatest number of cures, without unnecessary operations? These are our problems, and their solution is not entirely simple. Three examinations are necessary: a general physical, a pelvic and a postural. If the pelvis proves to be negative our problems are simplified, as operative correction is not apt to be considered except for definite orthopedic pathology, and cases of that type seldom fall into this indefinite group. If the general physical examination yields findings that might cause fatigue, they should be treated. If the posture is poor, exercises and supports should be advised. If in addition to general and postural findings, gynecologic pathology is present, do

not attempt its correction until the other lines have been thoroughly tried, or at any rate do not correct it, and neglect its associates. Naturally many gynecologic conditions that might cause backache demand operations, for entirely different symptoms, and these of course should not be postponed, but carried out in conjunction with other indicated methods.

Unfortunately a uterine retrodisplacement, is one of the few pelvic conditions that can be temporarily corrected by means of mechanical support. This aid to diagnosis, in fact to a prognosis of an operative outcome, is not resorted to as commonly as would seem indicated. Certainly if a well-fitting pessary holding the uterus in a position of antelexion does not relieve backache, an operation, no matter how skillfully performed, cannot be expected to bring about a cure.

If pelvic relaxations cause backache by traction on the uterosacral ligaments, why is backache so uncommon in cases of complete prolapse? Graves⁷ has written that "the more complete the prolapse the less the pain." Individuals with this pathology routinely complain not of sacral pain, but of lower abdominal discomfort. It is hard to explain backache, then, on a basis of ligamental strain. If, however, pelvic relaxations are present in a patient with a faulty posture, backache may well be a concomitant symptom, but its relief should not be expected from plastic operation upon the genitalia; although, as mentioned before, a temporary relief may well be expected as a result of relieving fatigue.

Obstetric conditions have not been considered, and time does not permit a thorough discussion of this subject. LaVake,⁸ however, expresses the opinion of the majority when he says, "In the postpartum patient abnormal conditions here [in the back] are more frequent causes of backache than are gynecologic conditions." He specifies conditions, "in the sacroiliac or lumbosacral joints, in the muscles of the back, in unequal length of legs, or flat feet." The low back pain or coccydynia, so commonly seen following confinement, has its primary cause in delivery, but its correction is an orthopedic problem.

There is no doubt that many, and perhaps the majority, of backaches are gynecologic; nevertheless the percentage of operative fail-

ures is certainly too high. Bullard⁹ in 1921 gave the following information: "In a series of 721 cases of [gynecological] backache 85 per cent were cured by operation, 15 per cent were unrelieved. Probably more than 15 per cent of female backaches are not gynecologic. Finally that 15 or 20 per cent all cases of retroversion, prolapse, pelvic inflammatory disease, lacerations, or pelvic tumors do not have backache." This information seems especially pertinent. If 15 per cent of cases supposedly gynecologic prove not to be, then the percentage of all backaches in women that are not gynecologic must be much more than this. There has been some advance in the past eight years, but nevertheless the figure of 15 per cent of failures probably has not been appreciably reduced throughout the country as a whole. In view of this possible failure, one cannot emphasize too strongly the need for exhaustive study before seeking aid along operative lines.

These ideas are not presented as original, but represent a gradual development in this clinic under the guidance of Dr. Reuben Peterson. In a recent article he¹⁰ has reviewed all of the cases of retroversion that were seen in the University Hospital from 1901 to 1928. 7,378 such cases were examined or 23.3 per cent of the total gynecologic cases seen. Of this number 1,392 or 18.8 per cent were operated for a correction of this condition. He points out, however, that this percentage is decreasing under the present routine as shown by the fact that from 1925 to 1928 only 11 per cent of patients with retroversion were operated in contrast to 21 per cent from 1901 to 1925. This decrease is explainable on the grounds that more attention is being paid to faulty posture and to orthopedic conditions in the back, than formerly, and that every patient with the syndrome of backache and retroversion is not at once considered operable.

It can be concluded, from the preceding statements, that too much emphasis has been placed upon pelvic abnormalities as causative factors of backaches. This has resulted in the opinion that pelvic operation is the panacea for all such complaints. This in turn has naturally brought about a large number of failures. Postural conditions, on the other hand, because of the fact that their significance is often misunderstood, and that their treatment demands constant control

and management, have been neglected or overlooked. A reversal of this condition is necessary if our results are to improve.

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RHEUMATIC CARDIAC DISEASE WITH SPECIAL REFERENCE TO THE NEWER CONCEPTS OF RHEUMATIC FEVER*

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Studies conducted during recent years have shown rheumatic fever to be unusually extensive in its involvement, paralleling syphilis and surpassing tuberculosis. In addition to the well known participation of the joints and heart in the disease, there occurs involvement of the large and small arteries, nervous system, lungs, pleura, kidneys, skin and diaphragm. The names that have been applied to the disease, acute articular rheumatism, acute rheumatic fever, and so forth, unquestionably have been potent factors in retarding accumulation of knowledge.

ETIOLOGY

Various theories and hypotheses concerning the etiology of rheumatic fever have been advanced, but positive proof of a specific cause has not yet been presented. Little doubt remains that the disease is infectious, and in numerous instances strong evidence for its communicability has been presented.²⁴

Serous polyarthritis has been produced experimentally in various ways, by the use of bacilli of dysentery, *Mycobacterium tuberculosis*, *Alcaligenes militensis*, and *Treponema pallidum*; yet the disease thus induced differed materially from true rheumatic fever. Nonhemolytic streptococci frequently have been recovered from the blood, joints, cardiac valves and pericardial fluid in rheumatic fever, and numerous investigators, particularly Poynton and Payne, Rose now,^{21,22,23} Coombs and Clawson, associate this organism with the etiology of the disease.

Inoculation of animals with streptococci isolated from patients with rheumatic fever has resulted in myocardial lesions that are similar to, but not identical with, Aschoff's nodules. On the identity of these experimental lesions rests, to a considerable extent, the controversy attending the hypothesis that streptococci are the cause of the dis-

ease. Subacute bacterial endocarditis has now been positively identified with the invasion of nonhemolytic green-producing streptococci, and the occurrence of this disease in such an unusually high percentage of patients previously afflicted with rheumatic fever has offered an alluring causal association. An immediate objection to this idea presents itself in the great differences in the reaction of the tissues to the two diseases. The lesions of subacute bacterial endocarditis are almost without exception embolic; the lesions of rheumatic fever unmistakably are of two types, exudative and proliferative, whereas embolic phenomena are rare except as they occur with subsequent cardiac failure. The pathogenesis of rheumatic fever will be considered more fully in later paragraphs.

These differences between rheumatic fever and subacute bacterial endocarditis have been explained theoretically as being due to differences in the number and the virulence of the organisms. Convincing proof of this allegation, however, is still lacking. Swift,³¹ in a recent publication, discussed three aspects of the etiology of rheumatic fever: (1) elective localization of streptococci, (2) elaboration by specific organisms, of specific toxins, and (3) rheumatic fever as an allergic phenomenon. He met the ar-

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gument for elective localization with the objection that the disease is not limited but is as widespread as syphilis. The hypothesis of specificity of streptococci, as advanced by Small,^{25,26,27} is dependent on recovery of indifferent streptococci in blood culture from some patients with rheumatic fever, on modification of the course of the disease by an immune serum prepared against these organisms, and on the effect of a vaccine prepared from them. Swift³¹ objected to these claims with the statement that they do not take into consideration the possible part played by other types of streptococci which have been recovered from blood cultures or tissues of patients, and that they do not consider the influence of other types of anti-streptococcus serums or vaccines.

The studies of Hitchcock and of Nye and Seegal have shown that indifferent streptococci are found as frequently in the throats of nonrheumatic as in those of rheumatic subjects and that the strains recovered from blood cultures belong to different immunologic groups. Swift and Kinsella, and Zinsler and Yu, have shown a multiplicity of cultural and immunologic types of streptococci, and Menzer, Cole, and Bull have demonstrated that strains recovered from patients with rheumatic fever produce the same lesions as do those strains obtained from the throats of nonrheumatic persons when injected in large numbers into experimental animals.

In recent years, investigators have been considering allergy as at least a factor in the etiologic problems of rheumatic fever. Swift³¹ looks on the allergic hypothesis as a reasonable explanation which may account for the disagreement regarding the infecting organism. The investigations of Swift and his coworkers^{1,7,8} regarding allergy are of interest, and merit careful consideration. They found that in rabbits the production of focal lesions by certain nonhemolytic streptococci resulted in a hypersensitive state similar to that which occurs in tuberculosis. They expressed the belief that this hypersensitive, or allergic, state is dependent on the production of focal lesions and that when the state is once present it can be continued by injection of streptococci that practically do not provoke a reaction in normal animals. An animal that has been highly sensitized responds to intracutaneous injection of very small doses of streptococci, with marked edema, exudation, and prolifera-

tion; to corneal injection, with interstitial keratitis, and to sufficiently large doses administered intravenously, with death.

In animals that were first inoculated intravenously, none showed the reactions of hypersensitiveness, and the resulting lesions were considerably smaller than those which occurred in normal animals following intracutaneous inoculation.^{32,33} In the majority of their animals, Swift and his coworkers could maintain the hypersensitive state by intracutaneous inoculations continued for months; however, intravenous inoculation in appropriate dosage abolished the reaction so that the animal was in the nonsensitive, or immune, state. The prolongation of the hypersensitive state by focal lesions appeared to be distinctive of the nonhemolytic streptococci, for repeated intracutaneous inoculations of hemolytic streptococci brought on decreasingly intense reactions. There was no apparent specificity of nonhemolytic streptococci in hypersensitive animals.

These observations which demonstrate an allergic and an immune type of reaction toward the same nonhemolytic streptococcus, are of significance, and Swift³¹ applied these phenomena to the well known differences existing between rheumatic fever and subacute bacterial endocarditis. In rheumatic fever focal infection is generally conceded to exist, and there is a marked tissue reaction to certain irritants, which, if they are streptococci, are present in only small amounts in any one region.

As has been stated, the tissues in subacute bacterial endocarditis fail to respond overactively to the infective organism. The lesions in this disease are embolic and the tissues involved do not react by exudation or by proliferation to the extent observed in rheumatic fever. Swift³¹ did not interpret the data in subacute bacterial endocarditis as indicative of failure of the tissues to react to the infection but rather to a reaction characterized by diffuse hyperplasia of the hematopoietic system, and to the embolic lesions.

In defense of the allergic theory of rheumatic fever, he stated that although the part played by streptococci in causation is not irrevocably established it offers the best available explanation of how different strains of the organism could produce analogous clinical and histopathologic effects.

Rheumatic carditis frequently has been observed following chorea, and this estab-

lished chorea as being closely related to rheumatic fever.

CLINICAL FEATURES

The typical features of rheumatic fever, such as increasing fever, toxemia, sweats, migratory involvement of large joints, and leukocytosis, are so well known that further emphasis on them would be irrelevant. At the end of three or four weeks, in many cases, the patient is apparently well and is able to return to work. The disease often appears to be self-limited. In many cases, the convalescence is not uneventful and after a brief and variable period of normal temperature and absence of leukocytosis, these signs reappear, and the pulse rate increases, and often is disproportionate to the fever. A systolic murmur may be audible over the cardiac area and there may or may not be disturbances in the rhythm of the heart. These phenomena must at once direct attention to cardiac involvement. It is well to carry suspicion even further, because of the appallingly high incidence of carditis in rheumatic fever, and to consider the heart as participating in the disease until positive proof to the contrary is available.

It is not unusual, in practice, to observe patients with well marked mitral stenosis who deny having ever been afflicted with rheumatic fever or chorea. Since these lesions are so notoriously the result of rheumatic fever, the question is at once brought to mind whether or not these patients have suffered from rheumatic fever in one of its more unusual forms. Frequently the patient dates his illness from an acute infection which is said to have been influenza; yet it is known that bona fide cases of influenza have been exceedingly rare since the severe pandemics. Furthermore, it is known that cardiac injury, at least of the type simulating rheumatic carditis, did not occur with influenza. These observations may indicate that these current, unidentified, infectious illnesses are in reality nonarticular forms of rheumatic fever. In a recent publication, Sutton showed that among 427 boys and girls with rheumatic cardiac disease, 18 per cent did not give a history of chorea, acute arthritis or growing pains.

The primary attack of rheumatic fever may be followed immediately by a second attack, in all respects similar to the first, with recurrent, migratory articular involvement and with evident visceral participation.

In the cases of lesser recurrences, particularly, the therapeutic measures, employed may modify the clinical picture sufficiently to mislead medical judgment. Control of symptoms and signs by treatment may erroneously be interpreted as being the result of spontaneous abatement of the disease, and premature activity on the patient's part may result disastrously.

Before the cardiac phases of rheumatic fever are considered it may be well to mention other visceral and associated involvement in the disease.

Fibrinous pleuritis not infrequently occurs in rheumatic fever, especially as a complication of rheumatic carditis. It occurs most commonly on the left side, probably because of the proximity of the pleura to the pericardium, although cases of bilateral pleuritis have been reported. The inflammatory process may be fibrinous or serous, and if effusion occurs it is in moderate amount only and aspiration rarely is required. The acute process subsides by the organization of the fibrinous exudate and resulting obliteration of adhesions between the visceral and parietal layers of the pleura.

Rheumatic fever is sometimes accompanied by bronchopneumonia, or by lobar pneumonia, which may occur at any stage of the disease. I have seen bronchopneumonia occur almost coincidentally with recurrence of rheumatic fever. Rabinowitz described what he believed to be a pulmonary lesion characteristic of rheumatic fever. The lungs do not show pneumonic consolidation, but areas of congestion, edema and atelectasis are present. Vascular lesions also exist.

Acute nephritis during the course of rheumatic fever is rare, although instances have been reported. Abnormal constituents of the urine, such as erythrocytes and casts, occurring during the acute infection, strongly suggest actual renal injury, and it is possible that the low incidence of nephritis signifies that virtually complete recovery of the kidney occurs in the majority of cases. Intimal lesions in the arterioles of the kidney, identical with those observed in the pericardium, were observed by Evans in a case of rheumatic fever; others³⁶ have recorded similar observations.

The participation of the skin in the disease apparently often escapes detection. Small subcutaneous nodules may occur. They vary in size from 0.5 mm. to 0.5 cm.,

are firm, usually painless, and are most likely to be situated just under the skin, overlying such prominences as the patellas, elbows, dorsal surfaces of the hands and feet, skull and vertebræ.^{15,31} The nodules are evanescent, appear suddenly, remain a few days, and then disappear, although they may persist for several weeks or months.

The identification and description of rheumatic lesions in the blood vessels, especially by Klotz and by Pappenheimer and Von Glahn^{18,37} have been valuable contributions to the subject and have, above all, emphasized the widespread distribution of the disease in the body. The lesions demonstrated by these workers were microscopic in nature and consisted of Aschoff's bodies or isolated Aschoff's cells in the adventitia of arteries. They found healed lesions, appearing as flame-shaped scars, in the media, and in later studies they found active lesions in the media of nutrient arteries. The walls of these arteries were thickened from swelling and proliferation of the endothelium and from cellular infiltration. Large collections of lymphocytes, polymorphonuclear leukocytes and Aschoff's cells surrounded the vessels. The arteries that have been found to share in the disease are the aorta, the coronary arteries and their branches, the arteries of the lungs, aortic valve, kidneys, perirenal and perisuprarenal adipose tissue, testes, ovaries, pancreas and intestines. Thrombosis in larger veins is occasionally observed. Aschoff's nodules also have been demonstrated in the diaphragm.

I have commented on the distribution of the disease to emphasize one of the prominent modern concepts regarding it, for without this point of view the disease will continue to be overlooked in its nonarticular forms.

PATHOGENESIS

The lesions of rheumatic fever are exudative and proliferative.³⁰ There is a reaction of the tissues to areas of focal necrosis which in many instances is extremely minute. Following this destruction of tissue, exudation of fluid and of cells occurs; it is exemplified very well in periarticular accumulations. The fluid contains fibrin, many polymorphonuclear neutrophils, and, often, wandering cells. Similar exudates are found in the lesions of the left auricular endocardium, the aorta and smaller arteries.

Frequently marked increase in the fixed tissue cells occurs and forms the basis of

Aschoff's nodules and the subcutaneous nodules; the latter appear to take their origin from the perivascular spaces. This proliferative tissue reaction has been found not only in the heart but also in the lungs, pleura and elsewhere. Exudative lesions are of course not characteristic of rheumatic fever, but the degree of exudation surpasses that of most other diseases.

As has been stated, the heart is involved in a remarkably high percentage of cases of rheumatic fever. The incidence is so great that rheumatic carditis is one of the leading causes of cardiac death. Invariably the endocardium, myocardium and pericardium are involved, but not always in the same proportion. Understanding of the characteristics of the lesion, as has been mentioned, enables the visualization of what occurs in valvular endocarditis. Tissues that, through anatomic arrangement and through physiologic demand, are dynamic and bear stress, have been shown to be favorite sites for the localization of lesions. This is particularly true of the heart and its structurally complex components. The endocardium apparently reacts to the rheumatic process in a manner similar to that of the endothelium of arteries.

In fetal life, the cardiac valves contain vascular structures which apparently, in many cases, disappear with the advent of childhood. The persistence of these vascular structures in childhood and adolescence has been demonstrated by Kugel and Gross, Bayne-Jones, and Kerr and Mettier. It is believed that the persistence of vascular structures increases the likelihood of valvulitis. The subendocardium, below the juncture of the valves with the endocardium and the endothelium of the vessels, is also a region that is involved in the rheumatic process. There are, thus, several possible forms in which valvular injury may occur: (1) by involvement of the investing endocardium; (2) in and about the vessels of the valves, and (3) from lesions in the valvular rings.

The older concepts regarding valvular injury were different from those held at the present time. It was believed that the infection occurred primarily on the surface of the valve and extended by continuity into the deeper structures. Modern studies, however, have clearly disproved this view and have established the process as one of primary valvulitis.

The vegetations of rheumatic endocarditis are small and verrucous, and occur at the line of valvular closure. In the mitral valve the entire line of closure is the seat of verrucae; in the aortic and tricuspid valves, only a portion of the line of closure is involved.¹⁴ The vegetations heal at a very early stage, and in time become firmly organized. The great tendency for rheumatic endocarditis to produce stenosis is not adequately explained by cicatrization of the verrucae, but the occurrence of interstitial valvulitis readily tends an explanation. Shortening of the chordae tendinae by inflammation and by stress also contributes to the stenotic process.

A single attack of rheumatic fever may result in mitral stenosis, but the ultimate valvular deformity may not result entirely from the initial acute infectious process. A low-grade and extremely chronic infection may persist for a considerable time, and lesser recurrent episodes occur that actually cause greater subsequent injury than that which results from the primary infection. This point becomes of great practical importance in the treatment of patients with rheumatic carditis. Pure valvular insufficiency is rare; yet occasionally such defects are disclosed at necropsy.

Many observers have demonstrated typical rheumatic lesions in the endocardium of the left auricle, and occasionally in the right auricle. The lesions extend upward from the root of the posterior leaflet of the mitral valve and resemble patches of endothelial thickening. Sometimes they are covered by a thin layer of fibrous tissue. The lesions are small, rarely exceed 3 cm. in diameter and ultimately become flattened areas of increased density. They contain Aschoff's bodies which occur in rows by virtue of the arrangement of the lamellae of the elastic tissue; the result is a banded appearance.

The myocardium always participates in the disease. The characteristic lesions are Aschoff's bodies, which are rounded, fusiform or spindle-shaped bodies in the interstitial substance, usually in the immediate vicinity of an arteriole. They are usually invisible to the naked eye. They occur in greater numbers in the left ventricle, particularly near the origin of the aorta, in the muscle in the vicinity of the mitral valve, in the apex near the septum, and in the intraventricular septum near the base.

Aschoff's nodules are composed of large

cells, surrounding a necrotic center; the cells are polygonal and contain one or more nuclei. Their presence is irrevocable proof of rheumatic fever, but their absence does not imply the converse, because of the fact that they ultimately disappear. They are believed to exist for several weeks to several months, and ultimately they are replaced by scar tissue.

It is not definitely known at which stage of the rheumatic infection hypertrophy of the myocardium occurs, although Coombs ventured the opinion that it begins while the signs of acute carditis are subsiding. Dilatation and hypertrophy, to some extent at least, are direct results of myocardial involvement; they have been proved to occur in the absence of a valvular defect or of pericardial adhesions. With the addition of mechanical barriers, such as those imposed by stenotic lesions, hypertrophy may become very pronounced.

Some degree of fibrinous pericarditis is almost always an accompaniment of rheumatic carditis. It is usually part and parcel of pancarditis, although instances without endocardial involvement have been observed. The involvement may be patchy but more generally is diffuse. If exudation is profuse, it is churned by the heart's movement into transverse or oblique ridges, which gives the irregular, shaggy appearance of the so-called *cor villosum*. As organization of the exudate occurs, the pericardial cavity becomes obliterated in part or entirely. In more severe infections, the inflammatory process may extend beyond the parietal pericardium and may produce adhesions to the diaphragm, pleura, mediastinum and thoracic wall. This results in one of the most crippling mechanical barriers to which the heart may be subjected. The pericardium is also the seat of Aschoff's nodules.

The apparent predilection of rheumatic fever for the vascular structures at once brings forth the magnitude of this phase of the disease. The extensive involvement of the cardiac structures, in the majority of cases, emphasizes the seriousness of rheumatic carditis, the proof of which is found in the studies on mortality. The nature of the resulting mechanical barriers constantly subjects the heart to increased load, which is an important factor in subsequent cardiac failure. The chronicity of the infectious process, and its tendency to recur, are

likewise provoking influences in promoting cardiac failure.

EXPECTANCY OF LIFE

Death resulting from acute rheumatic carditis is not common, as evidenced by the small series of cases reviewed by Thayer and others. However, the eventual toll from cardiac failure is enormous. Few studies have been made which may be said to represent the life cycle of the disease. Two years ago I³⁸ published the results of a study which comprised 160 patients regarding whom I had reliable data as to the onset of rheumatic fever or chorea and the date and actual knowledge of death from cardiac disease. All the patients presented striking evidence of rheumatic carditis at the time of examination.

The cases were divided into three groups according to the type of lesion found clinically: (1) those with mitral involvement, 124 cases; (2) those with aortic involvement, twenty-one cases, and (3) those with both mitral and aortic involvement, fifteen cases. The incidence in the two sexes was equal.

In the group with involvement of the mitral valve the average age at which the first attack of rheumatic fever occurred and the presumable time at which the heart became involved was twenty-one years. The earliest age at which the infection occurred was seven years. The average duration of life in this group was only twenty-one years after the first attack of rheumatic fever; the average age at death was forty-two years. Even the maximal age limit was well less than the anticipated normal average.

The statistics in the group with aortic involvement were similar. The average age at which the first attack of rheumatic fever occurred was twenty-one years. The youngest patient at the time of the acute infection was aged seven years. The average expectation of life was, as in the group with involvement of the mitral valve, only twenty-one years after the initial attack of rheumatic fever; the average age at death was forty-three years.

In the third group, made up of those patients with both mitral and aortic involvement, the prognosis was considerably less favorable than in the other two groups. The average age at which the acute infection occurred was sixteen years; the earliest recorded age was eight years. The average

expectation of life was only sixteen years after the first attack of rheumatic fever; death occurred at the average age of thirty-two years. The greatest age of survival was forty-nine years.

This study did not show that recurrent rheumatic fever particularly influenced expectancy of life from the standpoint of carditis, although this probably would not hold true in a larger series of cases. Recurrences occurred most commonly in the first decade of life, and were recorded in 55 per cent of the cases. An instance of recurrent rheumatic infection did not occur after the thirtieth year of life.

COMMENT

Until the etiology of rheumatic fever is established, a certain specific therapeutic agent will not be available. It is doubtful that even with such knowledge, a specific cure will be forthcoming. It is imperative therefore that active steps be taken to institute measures that are supported by scientific reason and that may be instrumental in minimizing the incidence of rheumatic fever. Foremost among these measures are enforcement of the doctrines of hygiene, and education of the laity, particularly regarding the care of children.

The eradication of foci of infection is important, although no one would venture to offer such a procedure as a positive measure of prevention. The removal of infected tonsils is unquestionably indicated although rheumatic fever occurs in cases in which tonsillectomy has been successfully performed and in which other foci of infection have not been demonstrable. It is difficult to obtain reliable data on the influence of removal of foci of infection as a preventive measure, for in a large series many cases will occur in which removal has been incomplete.

One of the most important measures to be advocated in the treatment of rheumatic fever is a sufficiently long period of rest in bed. If carditis is present or is suspected, the period of rest should occupy months and not weeks.

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HYDROPS GRAVIDARUM: REPORT OF THREE CASES

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DETROIT, MICHIGAN

Any attempt at classification of the toxemias of pregnancy has always met with indifferent success, and with failure of general acceptance, due to the fact that absolute signs for differentiation have not been discovered. Division into the so-called "renal" and "hepatic" types has served the purpose of gross differentiation, but even this is presumptive; for, in spite of evident anatomic differences, the clinical pictures are so manifestly identical as to make a clinical differential diagnosis almost impossible at the time of attack.

That a metabolic disturbance occurs during the eclamptic state has been an observation held by most investigators. As to just what metabolic disturbances take place, their etiology, and their *modus operandi* have been moot questions which exist today; and with the introduction of finer chemical and physical methods of study the opinions are tending to even greater divergence. As witness the work of Titus and his co-workers who maintain that the eclamptic disturbance is due to a fall in blood-sugar level anal-

agous to a hypoglycemia; Hofbauer, who is inclined to attribute histamine, or one of its closely related protein split products as the offender; Hinselman, who feels that the etiologic factor at work is a physiochemical one resulting in capillary changes creating a cardio-vascular-ischemic change; and of Zangemeister, who in 1919 abandoned the organic toxin idea, and elaborated his theory of hydrops gravidarum with the daring

statement that water was the eclamptic poison.

These and other protagonists have proceeded to propound their views with the result that the recent obstetric literature is filled with work, in many ways contradictory, in many ways similar, and yet in no way conclusive. To attempt to follow just one point of view leads eventually to a blind alley from which there is no logical escape. One must recognize that the terms "toxemia" and "eclampsia" represent a group definition rather than an individualized entity. Hence the folly of attempting to place all cases in one strict class, or to apply one regular routine method of treatment to all cases falling into the general group.

In this country, the work of Zangemeister has been overlooked, due perhaps to the rather radical departure of his theory from the organic toxin idea; and from the fact that he fell into the error of placing all eclampsias into his group of hydrops gravidarum. Where Zangemeister has erred in concluding that all eclampsias are cases of hydrops, we have erred by losing sight of the fact that certain eclamptic cases do fall into his category. That hydrops gravidarum is a distinct entity, that it is one of the conditions which is classified as an eclamptic toxemia, and that its method of treatment must be differentiated from the usual treatment will be elaborated upon with the presentation of three cases.

Today we recognize hydremia as a normal physiologic occurrence in pregnancy. Miller, Keith and Rowntree showed that the blood volume was increased in pregnancy and disappeared in the puerperium. Pistuddi proved that the total mass of blood is increased at term with a tendency to an increase of watery contents and a relative diminution of proteins and of red corpuscles, which however are absolutely increased. In gravid women the mass of blood is 6.04 to 9.80 per cent, whereas in non-gravid women it is 5.23 to 7.80 per cent of the body weight. Plass has demonstrated a dilution of blood plasma during gestation and a return to normal about ten days after delivery. These findings show that a hydremia is present in pregnancy; and clinical findings have shown that this hydremia may be a basis upon which a pathologic state of fluid metabolism may be built.

Case 1.—Mrs. A. H., age 31, para-1. Past history negative. Present history of marked edema of lower extremities, face and abdomen occurring just one

week ago. Some headache and slight visual disturbances during past week. Patient states that she has gained 6 pounds in the last three days. She has gained 30 pounds in the last two months. Blood pressure elevated from 120 to 160 in one week. Blood pressure on admission 165/100. Weight on admission 203.5 pounds. Patient placed on a restricted protein diet. Fluid intake limited to 1,000 c.c. every 24 hours. Cracked ice given for thirst. Calcium chloride 12 grams daily by mouth. Blood chemistry findings normal. Urinalysis negative. Blood viscosity by Hess method 3.5. Wassermann negative. Weight first day 203.5 pounds. Second day 200 pounds. Third day 198 pounds. Fourth day 194 pounds. Fifth day bougie induction of labor with normal delivery. Weight on eighth day post-partum 166 pounds. Weight on discharge 163 pounds. Blood pressure on discharge 110/70. Patient states that normal weight is 160 pounds.

Case 2.—Mrs. G. W., age 32, para-4. Past history negative. Present history of marked increasing edema of entire body dating back two weeks. No headaches or visual disturbances. Blood pressure elevated 35 points in the last week. Blood pressure on admission 160/110. Patient states that she has gained about 15 pounds in weight in past two weeks. Weight on admission 175 pounds. Patient placed on a restricted protein diet. Fluid intake limited to 1,000 c.c. every 24 hours. Cracked ice given for thirst. Calcium chloride 12 grams daily by mouth. Blood chemistry findings normal. Urinalysis showed a slight trace of albumin with no casts. Blood viscosity by Hess method 2.9. Wassermann negative. Medical induction of labor with normal delivery. Weight on eighth day post-partum 145 pounds. Weight on discharge 142.5 pounds. Patient states that normal weight is 145 pounds. Blood pressure on discharge 120/82.

Case 3.—Mrs. M. J., age 30, para-8. Past history negative. Present history of increasing edema of lower extremities, abdomen and face for past three weeks. Elevation of blood pressure of 30 points in past two days. No headaches but slight visual disturbances. Blood pressure on admission 160/85. Examination reveals a patient 34 weeks pregnant. Weight on admission 164 pounds. Patient placed on a restricted protein diet. Fluid intake limited to 1,000 c.c. every 24 hours. Cracked ice given for thirst. Calcium chloride 15 grams daily by mouth. Blood chemistry findings normal. Urinalysis negative. Blood viscosity by Hess method 3.0. Wassermann negative. After being on this regime for 12 days patient was sent home. Weight on discharge 141 pounds. Patient subsequently had a normal delivery at home. Blood pressure on discharge 110/80.

These are cases to which the name of hydrops gravidarum is given because of the following characteristics:

1. Rapid and marked increase in weight concomitant with a generalized edema. The increase in weight is due to fluid retention in the tissues. The retention is of the tissues rather than of the kidneys.
2. Moderate, not marked, elevation of blood pressure.
3. Scant or no pathologic urinary findings. When present ante-partum the urinary findings disappear following the puerperium.

4. Normal blood chemistry.
5. Retinal findings only as resultant from the edema.
6. Lowered blood viscosity showing hy-dremia and blood dilution.
7. Remarkable response to calcium therapy cutting down the frequency of operative intervention.
8. Absence of renal or hepatic sequelæ following delivery.

The treatment for this condition is opposed to the generally accepted treatment of toxic pregnancies in which the usual milk diet and forced fluid regime is instituted. With the understanding that there is present a tissue retention the necessity for fluid restriction and for elimination becomes self evident. The response to calcium therapy is gratifying when used in sufficient dosage. The use of calcium in this condition was first witnessed by me while associated with the late Dr. W. E. Welz; and was based upon the findings of Meyer and Cohn, who demonstrated that calcium chloride given to infants caused a marked loss in weight due to loss of water.

SUMMARY

1. Whenever a gravid woman experi-

ences a sudden increase in weight with marked edema the condition of hydrops gravidarum must be thought of; especially when symptoms of renal disturbance are slight or absent.

2. The predominant factor in this condition is marked retention of fluids. There appears to be a disturbance in water metabolism.

3. Treatment is based on the principle of fluid restriction and the promotion of elimination by all channels.

4. Calcium chloride in heavy dosage acts as a marked diuretic.

5. The percentage of operative intervention will be decreased when the above factors are appreciated.

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FAMOUS MEN IN MEDICAL HISTORY

I. WILLIAM BEAUMONT*

CHARLES L. HUDSON, M.D.

Modern physiology and medicine owe much to the simple observations of William Beaumont, although his medical education was certainly inadequate from the point of view of present-day standards. Chance favors the prepared mind, and it was chance that made Alexis St. Martin come under the observation of the inquisitive mind of Beaumont, with its eye for details and its ability to record observations truthfully. It is interesting to learn something of the man himself, his life and environment.

The name Beaumont has been prominent in the annals of French and English history for centuries, references dating at least to the middle of the eleventh century. In 1640 a William Beaumont settled in Saybrook, Connecticut, and became a personage of considerable importance and wealth in the little

community. In the third following generation, a William Beaumont left Saybrook after he became of age, and located in Lebanon, Connecticut. In two more generations removed, there is the record of the birth of the William Beaumont of this paper on Nov. 21, 1785, in the little society at Lebanon which was just beginning to recover from the embarrassed condition in which it found itself after the revolution. Lebanon had been a point of considerable importance during the war, for here the Council of Safety had held many meetings in the old war office and here George Washington had conferred with Governor Jonathan Trumbull upon the affairs of the nation. Although the community had been absorbed in the national conflict and had neglected somewhat its local interests, it still boasted the best common school in New England, one which had been founded by a Master Tisdale.

*Read before the Victor Vaughan Society, Ann Arbor, Michigan, March 20, 1930.

Very little is known about Beaumont's early life but it may be assumed that his early schooling was above the average for his time. At the beginning of the nineteenth century, he was a boy of fifteen. The rapidly multiplying number of newspapers and magazines that were being brought to Lebanon must have conveyed to his receptive mind the knowledge of the vast progress of the world beyond his confined horizon. The Federal Party was passing into oblivion with the succession of Thomas Jefferson to the presidency; the states were taking an important place among the nations of the world, the population had passed the five million mark, and American law in general had been placed on a firm basis. Livingston and Monroe were negotiating the purchase of the huge Louisiana Tract of more than a million square miles and a few months time brought out the aura of impending danger of the War of 1812 because of the aggression of England's navy on American commerce.

It is not strange that as a knowledge of the larger world came to Beaumont in his puritanical country home, he should become restless and desire to enlarge his field of usefulness and experience; nor, are we surprised when we find him leaving his paternal home in 1806, starting out toward the north without any particular destination and arriving in Champlain, N. Y., in the spring of 1807. Inasmuch as farming was the principal industry here, and it was not to Beaumont's liking, he petitioned the trustees of the village school for the opportunity to teach this school. He received the appointment and taught for three years, gaining the respect and confidence of the people of Champlain. It was apparent that teaching was merely the means to the study of medicine for he occupied his spare time in reading medical books from the library of a Dr. Pomeroy, of Burlington, Vt., whom he had met doubtless on his way to New York from home.

After having read such works as would give him the fundamentals of medicine during his three years at Champlain, he attached himself to Dr. Benjamin Chandler, of St. Albans, Vt., as an apprentice. Under the system of training that Beaumont received, the apprentice accompanied his preceptor upon his visits to the patients, observing the doctor's methods of diagnosis and treatment. They were obliged to keep up

their reading, to learn the art of prescription writing, to become efficient in the practise of bleeding and cupping that was considered so effective at that time, to keep records of their cases and were occasionally permitted to perform an autopsy or to dissect a limb which had recently been amputated. It is evident that Beaumont made a wise choice of preceptor for there is every reason to believe that Dr. Chandler instilled into the mind of his young pupil the importance of developing the memory, his powers of observation and the habit of logical thought.

In 1812 the Third Medical Society of the State of Vermont granted Beaumont a license to practice. In this same year, rumors of war with England became a reality, and Beaumont secured an appointment as surgeon's mate in the Sixth Regiment Infantry. Not long after his appointment his unit went into action at Little York where an explosion of the British powder magazine killed and wounded great numbers of the American soldiers. The ensuing scene is best described by Beaumont:

" . . . Nothing but the groans of the wounded and the agonies of the dying are to be heard. The surgeons waded in blood, cutting off arms and legs and trepanning heads to rescue their fellow creatures from untimely deaths. . . . It awoke my liveliest sympathy and I cut and slashed for 48 hours without food or sleep."

Beaumont's work and bravery in this and in subsequent encounters was exemplary and brought forth official recognition from the military authorities.

Shortly after the treaty of peace in 1814, Beaumont resigned his commission in the army and entered in private practice with Dr. George Senter, the two of them announcing in the Plattsburg Republican (for they were to practice in Plattsburg) that they had commenced business in the line of their profession. The same newspaper announced that these two had received and offer for sale at the lowest prices, a large and well-selected assortment of "groceries," consisting of Madeira, Port, London Particular and Sherry, Wines, Cognac and French Brandy, Jamaica, St. Croix and New England Rum, Pierpont Ginger, Plug and Paper Tobacco, Pipes, Codfish, Shad, Mackerel, Chocolates, Spanish Segars, Window Glass, Snuff, Starch, Powder, Shot, Almonds, etc. This business was not appeal-

ing to Beaumont, and in about a year he sold out to Springer and Woodward, Beaumont confining himself to the private practice of medicine which was quite remunerative. At this time, however, Beaumont's friend, Joseph Lovell, had been appointed Surgeon General and was completely reorganizing the army medical corps. He offered Beaumont a clerkship which Beaumont accepted and later declined. The charm of army life was enticing to Beaumont, nevertheless, and in 1819 he made application for re-admission to the service. He was commissioned by President Monroe in 1820 as post surgeon, and was immediately ordered to Fort Mackinac in Michigan Territory, where he was to report to General Macomb, under whom he had served at Plattsburg. He had not been at Mackinac many months, however, when he requested a furlough to return to Plattsburg to marry Mrs. Deborah Green Platt, whom he had met while practicing at Plattsburg.

Beaumont's transfer to the Island of Mackinac was the first link in a chain of fortuitous circumstances which led ultimately to the important experiments on digestion and to Beaumont's recognition as a personage in medicine. Mackinac Island was a strategic military outpost early in the settlement of this northern territory, having first been fortified by the British. After the war of 1812 it was held by the States and it became particularly valuable in keeping the Indians of this region in submission. It had also been chosen by the American Fur Company as one of their trading posts. During the long winter months, the post was the epitome of somnolence and inactivity but early in June with the return of the Indians and voyageurs with the results of their winter's catch, the little village stirred from its long sleep and the beach became crowded with its tents and wigwams and seething mass of strange humanity.

One memorable day in June, 1822, suddenly from the company's store there is the loud report of a gun and amid the confusion and excitement the rumor spreads of an accident and there is the hurrying to the barracks for a doctor. In a few minutes, the post-surgeon, Beaumont, is at the unfortunate St. Martin's side making the examination. Beaumont's records of the case reveal the following description of the wound:

"The whole charge, consisting of powder and duck shot, was received in the left side at not more than

two or three feet distance from the muzzle of the piece in a posterior direction, obliquely forwards and outwards, carrying away by its force, the integuments more than the size of the palm of a man's hand; blowing off and fracturing the sixth rib from about the middle anteriorly, fracturing the fifth, rupturing the lower portion of the left lobe of the lungs, and lacerating the stomach by a spicula of the rib that was blown through its coat, lodging the charge wadding and fire in among the fractured ribs and lacerated muscles and integuments and burning the clothing and flesh to a crisp. I was called to him immediately after the accident. [1] found a portion of the lungs as large as a turkey's egg protruding through the external wound, lacerated and burnt, and below this another protrusion resembling a portion of the stomach, what at first view I could not believe possible to be that organ in that situation with the subject surviving, but on closer examination I found it to be actually the stomach with a puncture in the protruding portion large enough to receive my forefinger and through which a portion of his food that he had taken at breakfast had come out and lodged in his apparel."

Beaumont considered the case hopeless but considering it a duty to make some effort to save the man, he replaced the lung and stomach in their respective anatomical positions, debrided the wound and applied a poultice of flour, hot water, charcoal, and yeast. To Beaumont's surprise, the man continued to live, sloughing took place, and in about five weeks cicatrization and contraction of the external wound began. At about the sixth or seventh week, suppurating pieces of rib, clothing and shot had to be removed because of the tissue reaction around them. The deficiency in the lung and thorax was a suppurating wound for some time but later granulated over to Beaumont's entire satisfaction. The stomach, however, was much more obstinate and resisted his every effort at closure. The lips of the wound would not grow together and the integument and intercostal muscles could not be induced to grow across the aperture because of the necessity of keeping a gauze pad in place over the wound to retain the gastric contents in the stomach. Even after St. Martin recovered his health and spirits, a patency remained in the stomach wall which was partially closed by a flap of mucous membrane of the stomach which protruded through the opening. The thus formed natural valve could easily be displaced by the examining finger, however, permitting an observer to gaze into the stomach.

In 1824, much to Beaumont's despair and disgust, the county refused to keep St. Martin longer, and Beaumont took him into his own family although his salary at this time was only forty dollars per month. In the fall of that year Beaumont sent a report of

the case to the Surgeon General as a surgical case but it was not until 1825 apparently that he recognized the unusual opportunity for experimentation on the process of digestion. He then began the first series of experiments which later had world-wide publication. It must be remembered that he was still an army surgeon and his routine of duties must have interrupted his work often. Difficulties were encountered with "old fistulous Alexis" for St. Martin was not averse to taking French leave whenever the opportunity presented itself. On one occasion, after having been transferred to Niagara, N. Y., Beaumont received a furlough of two months in order to visit his family at Plattsburg and to present Alexis to some of the leading scientists of the day. The close proximity of their route to the native Canada of Alexis proved too much of a temptation to that unworthy creature and he left his benefactor for the scenes of his boyhood and was not heard of for several years. In the meantime, Beaumont was transferred to Green Bay, Michigan Territory, where he tried to forget his disappointment in Alexis with the new vaccination against smallpox. Interest in gastric experiments was again aroused, however, upon his receipt of a letter from an agent of the American Fur Company who stated that he had located St. Martin in Canada. He had been married and become the father of children and was working hard to support his family. Beaumont was forced to leave Green Bay for Fort Crawford on the Mississippi but made arrangements to have St. Martin and his family brought to him in the fur company's boats at his own expense.

Four years had elapsed since Beaumont had last seen Alexis, but upon St. Martin's arrival at the fort Beaumont began in earnest his second series of experiments. His occasional comments on his first series had caused considerable interest among medical men and many of his friends wrote him suggesting various types of foods to be tested in this human laboratory. With a thermometer, a few vials, and a sand bath for equipment, he set out to ascertain the effect of variations in the atmosphere on the temperature of the stomach, to find out whether the gastric juice began accumulating in the stomach during periods of fasting or even from the immediate or direct influence of hunger, and to ascertain the relative difference between natural and arti-

ficial digestion. Disregarding St. Martin's apparent docility, Beaumont now drew up with him one of the strangest contracts of history, wherein he promised St. Martin maintenance and a small wage in return for which Alexis was to submit to experimentation and to perform whatever menial duties that Beaumont saw fit to request.

Beaumont's labors were facilitated by the active interest his friend, Lovell, the Surgeon General, had in the work. Whenever possible, Lovell used his authority to arrange convenient places for Beaumont to work, also arranging a position for Alexis in the army so that he might be paid his wage from the Treasury rather than from Beaumont's pocket. It was on one of Lovell's arranged furloughs that Beaumont completed his third series of experiments in Washington. The fourth was completed at Plattsburg. While in the midst of these researches, Beaumont succeeded in enlisting the assistance of two of the leading scientists of the day, Robley Dunglison, Professor of Physiology of the medical department of the University of Virginia, and Benjamin Silliman, Professor of Chemistry at Yale. He sent these men samples of gastric juice for them to analyze, particularly to find, if possible, the solvent ingredients which had up to this time baffled scientists. These men found that the acidity of the juice was due to hydrochloric acid as Prout had contended some time before but for the most part their results were disappointing to Beaumont. He also sent a vial of the gastric secretion to Professor Berzelius in Stockholm, whose inability to find anything of interest in the juice, owing to the time consumed in transportation to Sweden, was Beaumont's greatest disappointment in the work.

The results of his experimentation were published in a volume in Plattsburg in 1833. The work is divided into two main portions: First, the preliminary observations on the general physiology of digestion in seven sections, namely, Of Aliment; Hunger and Thirst; Satisfaction and Satiety; Mastication, Insalivation and Deglutition; Digestion by the Gastric Juice; Appearance of the Villous Coats and Movements of the Stomach; and of Chylification and Uses of Bile and Pancreatic Juice; the second part contains detailed accounts of experiments and observations.

To appreciate Beaumont's studies it is

necessary to refer to the state of knowledge on the subject of the physiology of digestion in 1833, the date of publication of the book. Dunglison had that very year published a book on human physiology in which the old theories of concoction, putrefaction, trituration, fermentation, and maceration are all discussed and William Hunter is quoted to the effect that in spite of the advice of many physiologists, his view was that the stomach "is neither a mill, a fermenting vat, nor a stew pan; but a stomach, gentlemen, a stomach." The theory of chemical solution is being accepted. Reamur's tame buzzard had swallowed its metallic tubes filled with food; Dr. Stevens' stone-swallowing exhibitionist had swallowed the silver balls filled with food and later regurgitated them; and Spallanzani had conducted his familiar experiments with the sponges on strings. Tiedman and Gmelin and Prout had done much to solve the problems of the chemistry of the juice. It thus remained for Beaumont to demonstrate the phenomena occurring in the stomach during digestion, the precise mode of action of the juice, the nature of the juice itself, and its action outside the body. Osler sums up the important results of Beaumont's observations as follows:

1. The accuracy and completeness of the descriptions of the juice itself, quotations from which appearing in many current texts in physiology.
2. Confirmation of Prout's observation that the important acid of the gastric juice is hydrochloric.
3. Recognition of the fact that the essential elements of the gastric juice and the mucus were separate secretions.
4. The profound influence of mental disturbances on the secretion of the gastric juice and on digestion.
5. A more accurate comparative study of digestion in the stomach and out of it.
6. Refutation of Magendie's teaching that bile flows normally into the stomach and presentation of the fact that water rapidly disappears through the pylorus.
7. The first comprehensive study of the motions of the stomach.
8. A study of the comparative digestibility of various articles of diet, which is one of the important contributions to practical dietetics.

Beaumont's opinions on the motions of the stomach agree with those of Cannon, who worked with the bismuth meal and the

X-ray. Pawlow's conclusions that the secretions of the gastric juice is dependent on the taking of food and that the fasting stomach is entirely empty are antedated by Beaumont's. Beaumont was slightly in error in believing that the catheter with which he withdrew the juice from the stomach stimulated the flow of juice, for we do not believe today that mechanical stimulation alone will cause secretion. The facts that the gastric juice is discharged into the stomach gradually and upon requirement and that emotional depressions influence secretion are held by him and Pawlow alike. The determination of the connection between the central nervous system and the stomach was made by Pawlow, however, through his sham feeding experiments. Pawlow pointed out that the so-called appetite juice results from stimulation through the vagus nerve. Food directly introduced into the stomach will, of course, stimulate the secretion of the gastric juice but the process will be delayed and the flow will be poorer in quality and in quantity. Limited chemical knowledge did not permit the determination of the ferments of the juice but it is shown that in Beaumont's statement that the gastric juice "contains some other active chemical principles," he anticipated in a measure Schwann's discovery of pepsin. It is of little consequence that he failed to realize that contractions of the stomach are associated with hunger sensations and that the seat of hunger sensation is the nervous system, since he paved the way for these and other findings by subsequent investigators.

The remaining years of Beaumont's life are soon related. For two or three years after 1832 he was without any definite station, and upon his own request he was permanently located at the arsenal at St. Louis, Missouri. He moved his family to St. Louis and received permission to carry on private practice in addition to his military duties. His friend Lovell was replaced in 1836 as Surgeon General by Thomas Lawson, who was suspected of having some prejudice and animosity for Beaumont. There was no longer active support from the office of the Surgeon General; in fact, disregarding Beaumont's years of active service and important contributions to medicine, Lawson ordered him to serve in Florida. Beaumont protested on the grounds of age and service, but the order was not countermanded. Beaumont then resigned from

the service and settled down to private practice in St. Louis where he became very popular and quite well to do. The medical profession elected him to office in their societies and offered him the chair of Professor of Surgery in the Medical School and the general public presented him with a remunerative practice. These days must have been a pleasant relief from army regulation although he must have missed the army life as many prominent in military circles were disappointed in losing him from the service which Beaumont loved so well.

In March, 1853, while returning home from a visit to a patient, he slipped on an icy step, striking his head on the stonework. He did not fully recover his senses after the fall, and a few weeks following the fall, developed a carbuncle on his neck accompanied by an intractable fever and died on April 25. St. Martin lived a longer but much less fruitful life. The last reports from him alive were that he had become a drunkard, scraping out a meager existence on a farm at St. Thomas, near Montreal. Osler writes that upon hearing of St. Martin's death he communicated with the parish priest, urging him to secure the privilege of an autopsy and offering a fair price for the stomach. The

family of Alexis refused and went so far to defeat the plan for an autopsy as to hold the body at home until putrefactive processes had begun and then to bury him eight feet below the surface of the ground to prevent attempts at resurrection.

Beaumont's work becomes all the more interesting when we realize that Alexis was not the first gastric fistula encountered by science. At least four or five cases had been reported previously and still science had not benefited by observations on any of them. As Osler aptly puts it, the man and the opportunity had met and then had sprung the elucidating experiments for which every physician and every patient with a gastric complaint owes a debt of gratitude. To Beaumont belonged the gift of strong natural powers of observation, of a peculiar sagacity, of a zeal to keep abreast of the times, and of an honesty that reveres the truth above the sensational. In these days of specialization in medicine, Beaumont's life is a source of inspiration and encouragement for clinical research among all physicians and it is a kindly admonition to the medical student that commencement should actually mean a beginning and not the end of education.

THE WORK OF A PUBLIC HEALTH COMMITTEE

L. O. GEIB, A.B., M.D.*

DETROIT, MICHIGAN

The Public Health Committee of the Wayne County Medical Society is composed, at the present time, of 18 members, having representatives from the various branch societies, such as the East Side, West Side, Highland Park, Young Men's Study Club and some selected at large. The membership is then divided into sub-committees composed of about four members each to look after such activities as the Summer Round-up, Pre-School Child Ex-

aminations, Clinical Conferences, T. B. Campaign, Venereal Clinic, Rules and Regulations of Herman Kiefer Hospital and the Toxin-Antitoxin campaign.

The Pre-School Child campaign this year will be conducted for two weeks, the publicity and educational work being done by the Department of Health and the Parents and Teachers Association, various households solicited and literature distributed by the Camp Fire Girls; the doctors making the examinations gratuitously if so requested. The examination blanks used are made in triplicate; the original being retained by the physician for his files and records; a second being given to the child to return to school; the third being sent to the Board of Health. The Committee feels that many defects will be found and remedied and that they will not alone sell pre-

*Dr. Geib graduated B.A. from Macalester College, St. Paul, 1905; he attended the Detroit College of Medicine, where he obtained the M.D. degree in 1912. He was chairman of the Public Health Committee of the Wayne County Medical Society for two years. In November, 1929, Dr. Geib was appointed as one of the medical members of the Detroit Board of Health. The paper which appears in this number of the Journal M. S. M. S. was read before the Jackson County Medical Society April 15 and printed in the Bulletin of the Wayne County Medical Society August 26. It is here published at the request of a large number of members of the Society who are interested in the immunization of children of the pre-school and early school age.—Ed.

ventative medicine but will make beneficial contacts for themselves.

Clinical Conferences on contagious diseases are now being held every Wednesday morning at ten o'clock at the Herman Kiefer Hospital with an average attendance of about fifty physicians. A stenographer takes a record of the clinic. This is mimeographed and at the next meeting a copy is given to everyone who registered at the previous meeting. The hospital authorities feel that a number of much earlier diagnoses in contagious diseases, especially cerebral spinal-meningitis, have been made since these conferences have been instituted.

The Tuberculosis and Health Society approached the Public Health Committee a year ago in regard to a campaign for suspicious T. B. cases, especially girls who are working in the various department stores. They have formed clubs which are designated as the "Rainbow Trail to Health, Wealth and Happiness." Individuals in these clubs, under suspicion of tuberculosis, were to be sent to various physicians who had signified their willingness to make these examinations. Over 600 physicians had agreed to do this work and each physician was to make these examinations at from two to five dollars, the welfare worker to determine the financial status of the applicant.

In regard to the Venereal Clinic the Department of Health has made available a venereal clinic for instruction and diagnosis in the treatment of these diseases, giving a course lasting about six weeks.

Another committee on Rules and Regulations of Herman Kiefer Hospital has to do with an attempt to formulate regulations whereby the family physician can more advantageously treat his patients, both private and charity. As yet nothing definite has been accomplished.

Until the past three or four years there has been more or less open hostility between the Detroit medical profession and the Department of Health. This was seemingly due to lack of understanding. The health department felt that the private physician was uncoöperative while the medical profession accused the Department of Health of practicing medicine. Any project in preventative medicine sponsored by the Department of Health was viewed with suspicion. Quoting from the City Health Bulletin of January, 1930, of the Department of Health:

"The change from clinics and private physicians to private physicians only was not made until a coöperative plan had been carefully worked out by the Public Health Committee of the Wayne County Medical Society and the Department of Health and the plan approved by the Wayne County Medical Society. Briefly, the plan provided that the physicians of the city would give toxin-antitoxin and Schick tests. The physicians agreed to give these services free to those who could not afford to pay, the Department of Health agreeing to remunerate the physicians for such services rendered to indigents at the rate of fifty cents (50c) per injection of toxin-antitoxin and one dollar (\$1.00) for the Schick test, including its reading. Physicians further agreed to make reports of all toxin-antitoxin and Schick tests given on postal cards provided for this purpose. The Department of Health, in addition to the reimbursement for indigent cases, agreed to supply, free of charge, toxin-antitoxin and Schick material and Schick heated control material (through eight distribution centers established for this purpose), postal cards for reporting work done (self-addressed business cards for the receipt of which the Department of Health pays two cents, nothing being paid for those not used), and to keep records of children immunized and to carry on an educational publicity campaign for the purpose of focusing public attention on the need for diphtheria protection.

This publicity campaign included newspaper articles, paid newspaper advertisements, street car and bus advertisements, outdoor bill boards (kindly donated by the Walker Sign Company), home visits urging diphtheria protection, by nurses of this Department and agents of the Metropolitan Life Insurance Company, particularly to the homes of babies born during the preceding year, short talks on diphtheria protection to Parent-Teacher Associations, Women's Clubs and other organizations, articles in periodicals and magazines, and radio talks. As soon as a third dose of toxin-antitoxin is reported that child is sent a certificate stating that he has had the third dose of toxin-antitoxin but that the certificate is of no value until a Schick test has been made six months later and urging the parent to take the child to the physician on such and such a date (the date six months from that time being filled in) for the Schick test.

Space is provided on the certificate for the date and result of the Schick test and the signature of the physician. Children for whom records of a negative Schick test have been received are sent a certificate of immunization. As a means of stimulating an interest among the children, particularly the preschool children, the Children's Army Protecting Detroit Against Diphtheria has been organized. The wearing of a green button bearing the inscription just quoted signifies membership. These buttons are sent to all children who send in their names as having received their toxin-antitoxin treatments, giving also the name of the physician who gave the treatments. One of the daily papers, the Detroit Times, has been most helpful in carrying a daily notice of this project and as a result over 100 additional requests per day were received for buttons.

This description fits the programs of 1928 and 1929 equally well. There was, however, one important difference between the two programs. In 1928 the physicians of the city in general, through the local medical society, agreed to coöperate in the plan. For the most part they did coöperate splendidly but we must remember that not all physicians are members of the local medical society and that many who are members are very irregular in their attendance at meetings and are, therefore, often unfamiliar with the actions of their society. For these reasons not infrequently a child was taken to the office of a physician who was entirely unacquainted with the program and less frequently to a physician who was opposed to the plan. In order to avoid these difficulties, which, while they were not frequent, were of sufficient importance to warrant an attempt to eliminate them, in 1929 a letter was sent to all the physicians of the community outlining the diphtheria prevention program (as worked out by the Public Health Committee of the Wayne County Medical Society and the Department of Health) and asking them whether or not they wished to coöperate. Those wishing to coöperate were asked to signify in writing their willingness to give toxin-antitoxin at such hours as they might specify for \$1.00 per injection and free of charge to those who could not afford to pay (it being understood that the Department of Health would reimburse them for such indigent cases at the rate of fifty cents per injection

of toxin-antitoxin and \$1.00 for the Schick test, including the reading), to sign for toxin-antitoxin and Schick material taken and to send in to the Department of Health reports of work done, and to permit the use of their names on lists of physicians to whom prospective diphtheria protection patients might be referred. Approximately 900 of the 1,500 or so practicing physicians of the community have expressed their willingness in writing to coöperate in the plan. Many of the 600 physicians who did not sign the agreement are practicing specialties in which there would be no opportunity of undertaking diphtheria protection. It is estimated that approximately 80 per cent of those in a position to give toxin-antitoxin or the Schick test are on the list of coöperating physicians. In all probability a considerable proportion of the 20 per cent who are not on the list are giving diphtheria protection treatments to their own patients but do not care to have additional patients referred to them. The city has arbitrarily been divided into 27 districts and there are thus 27 lists of coöperating physicians. These lists are in the hands of the Department of Health nurses, insurance agents and other field workers having an opportunity of talking diphtheria protection. A prospective patient with no private physician is given a list of the physicians in his neighborhood who are willing to undertake diphtheria protection in accordance with the plan just outlined. Many patients are referred to such physicians through telephone calls received at the Department of Health. Before the plan was actually put into operation, three meetings of the coöperating physicians were held at which the entire program was discussed in detail and demonstrations of the Schick test and its reading given in order that there might be no misunderstanding concerning it.

The program of 1929 has proven superior to that of 1928 in that now we have a definite place (the names and office addresses of coöperating physicians), a time (the hours indicated by the physicians), and a price (\$1.00 per injection or free of charge to those unable to pay) which can be given the prospective patient. Furthermore, we know that all those to whom patients are referred are thoroughly acquainted with the program and coöperating in it.

The plan of having the private physicians do the work instead of having it done through clinics is resulting in a larger per-

centage of immunizations of preschool children in that the large number of physicians' offices provides a place within a reasonable distance of practically any home and the wide variety of office hours permits the choice of a convenient hour for taking the preschool child. There is also the very far-reaching benefit of new contacts between family and physician, which contacts may result in the physician becoming the health advisor for the family.

The 1929 program did not actually commence until November 17. From January 1 through November 16, only 4,063 children were given toxin-antitoxin, while from November 17 through December 31, 10,776 children commenced their toxin-antitoxin treatment.

While this work was done with the approval of the medical society, the rank and file felt that the clinics were taking away patients who could pay and rightfully belonged to them. Children were being trained to seek and receive something for nothing, and the private physician on account of the free clinics was neglecting to use preventative health measures. A great many individuals were not receiving preventative treatment, because the private physician did not have an incentive to preach or practice it. The more contacts the physician has with his clientele the better and more able he will be to note their physical and mental idiosyncrasies and peculiarities. He will be able to note and correct defects; he will retain a personal interest in his families; he will also be thinking along preventative health measures and developing a health consciousness.

In the spring of 1928 the Public Health Committee received a request from the Council of Parents and Teachers to assist in the so-called summer roundup. This request was thoroughly discussed and it was thought that the Parents and Teachers through the Board of Health were trying to subsidize the physicians. Dr. Vaughn, the commissioner of health, had insisted at the meeting that the private physician charge for the examination. A sub-committee was appointed who worked out the following plan:

The examination to be made over a one week period of all children entering school in the following fall; the examination to be made in the doctor's office, reported on blanks which were to be furnished by the

Department of Health; the blank to be given to the child, who presented it on entering school. This plan, especially the fact that it was to be made without charge, was done for the reason that the committee felt that if a charge were to be made the campaign would be unsuccessful and that the Department of Health would have a good excuse in another year to hold the examinations by the clinic method. While the plan did not meet with a great deal of success, it at least gave us a nucleus for a method of conducting all future campaigns.

In the fall of 1928 the Public Health Committee decided that all campaigns such as toxin-antitoxin, examinations of preschool children, examinations of susceptible tubercular cases in coöperation with the Tubercular Society, the cancer campaigns should be conducted on the following basis. Examinations should be made in the doctor's office; all publicity should be given by the Board of Health and censored by the Public Health Committee. The material such as toxin-antitoxin to be furnished to the physician gratis by the Department of Health.

The Committee at first had to sell itself on this plan. After about twelve meetings the Health Commissioner and his assistants were invited to discuss the plan. Much to our surprise after various modifications of details, the Health Commissioner enthusiastically agreed to coöperate. Again quoting from the Bulletin of the Department of Health of January, 1930:

"The community through its health department should assume the responsibility of acquainting its people with the facts concerning disease prevention and health promotion. Each individual should have sufficient information on the worth of such procedures as, for example, the complete physical examinations, regular medical attention for babies while well, etc., both as to the dangers which may be avoided and the real benefits which may result from them, so that he or she may reasonably decide whether to accept or reject such procedures. Services indicated by these procedures, medical examination, dental care, etc., should, we believe, be given by private physicians, dentists, etc., wherever people can pay for such services and for indigent persons by clinics. It is possible that at some time in the future even the indigents, as far

as preventive medicine and health promotion are concerned, may be cared for by the private physician, dentist or other specialist in his own office, the physician or dentist being paid a nominal fee for such service to indigents.

"The chief function of the Department of Health as applied to individual health is then to make as universally known as possible the facts concerning disease prevention and health promotion. These facts must be presented in an effective, popular and easily understandable manner. In order to get people to accept and practice the procedures advocated they must be repeatedly and forcibly presented. In carrying on this work of health education, we may use newspaper stories, paid advertisements, demonstration clinics, educational home nursing visits, pamphlets, stories in magazines and other popular periodicals, radio talks and lectures. The interesting, popular, yet forceful and truthful presentation of health principles is probably the point of greatest weakness in many departments of health and is therefore calling for particular attention and effort on the part of this department. The old saying that 'you can lead a horse to water but you cannot make him drink' is especially applicable to health education. It is not very difficult to obtain rather general acquiescence to health principles but to bring about any real benefit to the health of the community one's teachings must be effective enough to result in people actually doing the things recommended. Practically all new principles and procedures, even though they are scientifically sound and practicable, must be demonstrated before we can expect people in any very large numbers to practice them. We must show people by actually doing the work, and advertising to the fullest extent the results, that the procedure is workable, that it doesn't kill people or produce harmful results and that it does do the thing we claim for it. This type of health education used in establishing health practices which have not yet been widely used in that particular community usually takes the form of demonstration clinics. Such a clinic should, we believe, continue for

such length of time as it necessary to thoroughly establish the desired procedure in the community, at which time the clinic should be abolished, except for indigent persons, and the supplying of services rendered in such clinic turned over to the proper persons, physicians, dentists, nutritionalists, psychiatrists, etc. After such establishment of procedure has been effected and the clinic abolished, the Department of Health still needs to continue its general educational efforts, stories, advertisements, talks, home nursing visits, etc., in order to focus public attention upon the need for continuing this procedure.

"It is, we presume, a perfectly obvious fact that the Department of Health should continually strive for new and more effective methods of preventing disease and promoting good health, but should not present this information to the public until it is 'usable' information.

"It has been thought wise to go into the question of individual versus community responsibility for health in at least a brief way for the reason that the policy of this Department is founded upon the principles enunciated in the preceding few paragraphs and obviously influences all its work. All of the Detroit Department of Health clinics are demonstration clinics and will be abolished, except for indigent persons, as soon as the practices advocated in them are thoroughly established. Feeling that diphtheria prevention had been sufficiently well demonstrated, between 1921 and 1927, in 1928 the clinics for this purpose were abolished, and since that time the physicians of the city have been carrying on all the work of protecting children against diphtheria.

"To state the problem in the briefest possible manner, this Department believes that as far as individual health is concerned—that group of things over which the individual has the chief control—its function is to create a demand for well proven scientific procedures, the supply for which will be rendered by those persons best qualified to supply the demand—the private physicians, dentists, nutritionalists and psychiatrists."

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Commissioner
LANSING, MICHIGAN

THE YEAR'S WORK IN CHILD HYGIENE

The activities of the Bureau of Child Hygiene and Public Health Nursing reached eighty counties (all but Sanilac, Macomb and Isabella) during the year ending June 30, 1930. In twenty of these counties, the only activities were special studies related to childbirth, but in the sixty other counties the services included Women's Classes, Child Care Classes, Immunization Campaigns, and other similar activities. The year marked the completion of the Maternal Mortality Study (of 1,627 maternal deaths) and the beginning of a new study of a similar number of births survived by the mother. Following is a brief description of the various activities:

MATERNAL MORTALITY STUDY

In April, 1927, a study was begun of deaths of women in Michigan from causes connected with childbirth, the study to include such deaths from July 1, 1926, to December 31, 1928. The study was completed in January, 1930. In the city of Detroit, Dr. Joseph H. Curhan, of the Detroit Department of Health, carried on the field study of Detroit maternal deaths.

A total of 1,627 deaths was studied, narrative and tabulated reports of which are submitted for filing. The outstanding facts brought out by the study are as follows:

1. The need of intensive educational work among young women, indicated by the fact that 53 per cent of the deaths were of women under 30 years of age.

2. The number of preventable deaths—42 per cent from puerperal septicemia and 21 per cent from puerperal albuminuria, or 63 per cent from these two conditions which are largely preventable, or which yield to treatment if seen in time in the majority of cases.

3. The inadequacy of prenatal care—52 per cent had no prenatal care.

4. The percentage of operative deliveries. Of the cases which went through delivery, 53 per cent were operative.

5. The appalling number of abortions—22 per cent of the total maternal deaths followed abortions.

A STUDY OF BIRTHS SURVIVED BY MOTHERS

As a control to the maternal mortality study, a study of births which were sur-

vived by the mothers was begun April 1, 1930. It is planned to include in this study the same number of cases in each county as there were maternal deaths during the period included in the maternal mortality study. To date the study has been completed of 556 cases in 64 counties. It is too early to compare the two studies, but the figures already obtained indicate a much higher type of prenatal care given these survivals, a larger percentage of planned hospital deliveries, and of normal deliveries, and an exceedingly low percentage of sepsis, albuminuria or other complications of pregnancy or childbirth. A tabulated progress report of the study is submitted for filing.

CHILD CARE CLASSES

The demand for classes on infant and child care for girls in rural schools continues. Staff nurses conducted 1,447 classes with an attendance of 27,273; other public health nurses held 898 classes with an attendance of 23,076, making a total of 2,345 classes held and a total attendance of 46,349.

WOMEN'S CLASSES

Classes for women have been held in rural districts of 14 counties, by two women physicians and a graduate nurse. A total of 204 classes was held with an attendance of 2,670. Many requests are already on file for a return of the classes next year.

COUNTY NORMAL SCHOOLS

As reported last year, the Bureau of Child Hygiene and Public Health Nursing has coöperated with other bureaus of the Department in giving a series of lectures to county normal training classes. Field physicians of the Bureau gave the lectures on control of communicable disease and on child hygiene. Forty-eight county normal schools were given these lectures together with demonstration inspections of school children with a total attendance of 1,103.

PRENATAL NURSING

An educational nursing service to prospective mothers was given to the following counties: Clinton, Ingham, Ottawa, Alpena, Kalamazoo, Benzie and Mason counties. The length of the service varied from four months to one year. The service has been terminated in Benzie, Clinton and Ingham,

and in Ottawa county the supervisors voted to take over half the expense of the nursing service beginning January 1, 1930.

The type of service has been altered this year. It has been found difficult to locate all of the prenatal cases in a county, so now the nurse also supervises young infants and preschool children with special emphasis placed on the importance of immunization of these age groups.

During the year 878 prospective mothers have been under supervision; there were 3,816 prenatal calls made, 2,813 postnatal, 4,104 to mothers of young infants, and 1,842 to mothers of preschool children, a total of 12,575 home visits.

BREAST FEEDING CAMPAIGNS

During the summer the nurses, who during the school term conduct child care classes, are placed in counties where little or no public health work is being done. They secure names of newborn infants from township clerks and visit the mothers and advise them about the care of the babies, stressing the value of breast feeding. This year more emphasis has been placed on immunization of young infants than in previous years and mothers have been urged to take their infants and young children to the family physicians and have them immunized. Gogebic, Luce, Dickinson, Cheboygan and Gladwin counties have had this service, and mothers of 1,328 babies were visited.

IMMUNIZATION CAMPAIGNS

In five counties, Chippewa, Arenac, Gladwin, St. Clair and Calhoun, immunization campaigns were conducted. In Chippewa county, at the request of the County Medical Society, immunization in the rural parts of the county was done by the State Department of Health. In the other counties local doctors did the immunizing and were paid out of local funds. Nurses from the Bureau of Child Hygiene and Public Health Nursing assisted the doctors in all the counties. In all, approximately 9,000 children were immunized. Contacts were made in other counties but other public health nurses completed the work and final reports are not yet available as to results.

CERTIFICATES OF REGISTRATION OF BIRTH

As in former years, parents of all children born in Michigan during the year received certificates of birth registration. Included with the certificates was a condensed pamphlet on infant care, called "A Message to

Parents," and also a small pamphlet urging early immunization. A total of 99,437 such certificates was distributed during the year.

MOTHER AND BABY HEALTH CENTERS

Permanent local health centers for mothers and babies were supplied with blanks and literature as in the past. The majority of these centers made a monthly report, the Bureau having received reports from approximately 70 such centers. Reports showed that 28,706 infants were examined at the centers, and the prenatal attendance was 2,170. There were 28,134 home visits made from these centers by public health nurses.

LITERATURE

Literature on prenatal, infant and child care is distributed on request, with the exception of diet cards, which are distributed to physicians only, or at the request of physicians. During the year approximately 60,000 pamphlets were distributed, exclusive of the prenatal letters. There were 34,571 prenatal letters sent to prospective mothers, which, with the other literature, makes a total of 94,571 contacts through literature.

Requests for talks on all phases of prenatal, infant and child care are frequent, and 669 such talks were given to audiences numbering 15,319.

SUMMER ROUND-UP OF THE CHILDREN

As seventh vice president of the Michigan Congress of Parents and Teachers, the director of the Bureau has had charge of the Summer Round-up of the children, which has for its object the entering into school in the fall of a group of children free from remediable defects. The first step was to send letters to presidents of county and district medical societies, 54 in number, stating that the State Medical Society through its Council had endorsed the project, and urging coöperation of the various county and district medical societies. Later letters were sent to presidents of local Parent-Teacher Associations urging that their associations register for the Round-up. In all, 2,794 letters were sent in the interest of the Round-up, following which 390 local associations registered. At the National Congress of Parents and Teachers held in Denver in May, 1930, Michigan was awarded a medal for the greatest number of registrations of any state in the Union. Figures are not yet available as to the number of

children examined or the number of defects corrected.

MAY DAY CHILD HEALTH DAY

The observance of May first as Child Health Day is well established in Michigan. All the organizations interested in child welfare coöperated in the state-wide programs, and were represented on the May Day Committee which met in the office of the Bureau of Child Hygiene and Public Health Nursing early in March, 1930, to plan for the observance of May Day in Michigan. Following this meeting, County May Day Committees were formed with the county nurses as chairmen. Interest was further stimulated by the issuance by Governor Green of a proclamation setting aside May 1 as Child Health Day in Michigan. Immunization campaigns, clinics, physical inspection in schools, health talks and health plays in schools, as well as the more spectacular Maypoles, pageants and parades all made May Day in Michigan a day of definite value to children.

L. R. S.

INDUSTRIAL HYGIENE

Many industries have recognized the opportunity, through their health departments, to practice "preventive medicine." From their experience and the data obtained from physical examination of the applicants for employment come valuable suggestions for proper balancing of the health program of any community.

These industries have noted that a very high percentage of physical defects are found in applicants under 20 years of age, and that the nature of defects listed is very similar to that found among school children. Their conclusion is that many of these defects should have been detected and corrected during school life, and certain helpful health habits established that would carry over into adult life.

From these progressive health departments in industries comes the suggestion that if children could be brought to adolescence and young adult life with good nutrition, proper health habits and physical defects corrected, the problem of preventive medicine in industry would be partly solved.

Assuming that it is rational to believe that the basis for industrial health work is grounded largely in school health supervision, and aiming to vindicate, if possible, industry's charge of inefficiency against the

health work in the schools, the State Department of Health has sought to gather certain data from the health records of schools and industries. Owing to the lack of standardized record forms and the varying methods of examination procedure it is difficult to properly evaluate these findings. However, they present an interesting and challenging study.

This study for comparison was based on 147,000 pupils in public schools; over 20,000 in regular high schools and 5,000 in vocational, technical high schools, and 44,000 special cases. In industries, mercantile establishments and public utilities, over 50,000 employees were included.

Graphs were made of the data gathered. They show a marked similarity, as to nature and percentage of defects, of high school and vocational school students to the employees of 16 to 20 years of age. The percentage of defects found in students failing in scholastic work in high and vocational schools nearly paralleled the percentage of physical defects in applicants for employment between the ages of 16 and 25 years, and the ratio of rejections from these groups was almost constant.

The industries may thus be leading the schools to recognize and respond to their responsibility for a more extensive and practical health education program.

F. A. P.

FREEZING TOXIN-ANTITOXIN

The following communication from the National Institute of Health (Hygienic Laboratory), Washington, D. C., in regard to the effect of freezing upon toxin-antitoxin mixtures will be of interest to physicians:

"To all Manufacturers of Diphtheria Toxin-Antitoxin Mixture:

Gentlemen:

"Recent experiments in freezing current samples of 0.1 L- toxin-antitoxin mixtures have shown that under temperature conditions encountered in modern automatic refrigeration some mixtures will become toxic. Solid freezing for considerable periods (18 hours) causes mixtures to become relatively inert, but slight freezing for short periods has caused increased toxicity in some products. This increased toxicity is slight, but is believed to be sufficient to cause more or less severe local reactions, probably explaining such reactions which have been reported. There may be no

change in the physical appearance of the product.

"It is suggested that manufacturers place on the outside wrapper for this product, the following statement in red:

"Freezing damages this product;
store at 5° to 10° C (40° to 50° F).

"All mixtures tested at the National Institute of Health have not become toxic under the treatment given, but a sufficient number have shown this change to warrant a warning to users, particularly since prolonged freezing is detrimental to the anti-genic properties of mixtures.

Respectfully,

(Signed) G. W. McCoy, Director,
National Institute of Health
(Hygienic Laboratory)
Washington, D. C."

ENGINEERING

Summer work in the Bureau of Engineering is always heavy, and this year has been no exception to the rule. Inspection of highway drinking water supplies has kept four men on the road constantly, sending in samples for testing, and posting the safe supplies. While final figures are not yet available, indications are that the mileage covered, the number of supplies inspected, and the percentage of safe supplies will average about the same as last year.

Resort inspection has been carried on by seven men, two of whom were milk inspectors from the State Department of Agriculture, assigned to the Department of Health for this special piece of work. The state has never had such a thorough summer resort campaign. A complete list of the resorts inspected, together with the ratings given them, will be published by the Bureau of Engineering as soon as the data can be tabulated.

Construction work at state institutions has progressed rapidly during the summer months. The entire sewerage system is being remodeled at Lapeer, and a new sewerage system is being installed at Adrian. Bids have been received for the construction of the sewerage system at the Ypsilanti State Hospital near Saline.

DR. CASE JOINS STAFF

Dr. Muriel A. Case joined the staff of the Bureau of Child Hygiene and Public Health Nursing on September 15, filling the vacancy caused by the resignation of Dr. Florence Knowlton on August 1. Dr. Case received her medical training at Boston

University and has done special work in the Marine Biological Laboratories. She will assist in the special study now being carried on of births survived by mothers, in addition to teaching classes in child care and lecturing in the county normals.

MOUTH HYGIENE

Mouth hygiene activities of the Michigan Department of Health for the fiscal year ended June 30, 1930, are summarized in the annual report of William R. Davis, D.D.S., Director of the Bureau of Mouth Hygiene.

Since the budget of the bureau provides only for a director and a part-time stenographer, work was largely advisory, with emphasis upon educational measures. Effort was made to provide programs and educational material simple enough for the country school and rural community and yet capable of elaboration to fit the needs of larger and better organized communities. This was supplemented with as much field work in consultation, demonstration and lectures as the time of the director permitted. Coöperation in the Department's county normal program gave him an opportunity to present mouth hygiene facts to 1,103 prospective rural teachers, and lectures and demonstrations before the classes of the Training Station for Health Officers and Public Health Nurses provided valuable contact with prospective health workers.

The following brief tabulation indicates the work done:

Number of places visited.....	142
Number of addresses given.....	176
Total attendance.....	8,396
Adult	52
Attendance	2,620
School	109
Attendance	5,149
Professional Groups.....	15
Attendance	627
Conferences outside of office.....	113
Demonstration dental examinations....	109
Number examined.....	3,606

Leaflets

Requests	1,151
Distributed:	
Dental Hints for Prospective Mothers	5,413
Baby Teeth.....	64,077
Permanent Teeth.....	74,427
Total	143,917

School Blanks

Requests	184
Distributed	106,137

TRUTH ABOUT MEDICINE

NEW AND NON-OFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Non-official Remedies:

Pyridium—Phenylazo-2-6-diamino-pyridine monohydrochloride.—The monohydrochloride of an azo dye of the pyridine series, phenylazo diamino-pyridine. Pyridium has marked penetrating power and is non-toxic and non-irritant in therapeutic dosage. It is rapidly eliminated through the urinary tract. It is bactericidal in aqueous solution against staphylococcus, streptococcus, gonococcus, *B. coli* and even *B. diphtheria*. It is proposed for use in gonorrheal infections, urinary diseases, and in colon bacillus and mixed infections. The drug is supplied in the form of Aqueous Solution of Pyridium, 1 per cent; Pyridium Ointment, 10 per cent; and Pyridium Tablets, 0.1 Gm. Merck & Co., Inc., New York.

Mead's 5 D Cod Liver Oil with Viosterol.—A brand of cod liver oil with viosterol 5 D (N.N.R.). For a discussion of the actions and uses of cod liver oil with viosterol 5 D, see New and Non-official Remedies, 1930, page 257. Mead Johnson & Co., Evansville, Ind.

Ephedrine Nasal Jelly-Maltbie.—It is composed of ephedrine sulphate-N.N.R. 1 per cent, menthol 0.25 per cent, and sodium benzoate 0.5 per cent in a glycerite of tragacanth base. For a discussion of the actions and uses of ephedrine sulphate, see New and Non-official remedies, 1930, page 167. Maltbie Chemical Co., Newark, N. J.

Ephedrine Hydrochloride-P. D. & Co.—A brand of ephedrine hydrochloride-N.N.R. For a discussion of the actions and uses of ephedrine hydrochloride, see New and Non-official Remedies, 1930, page 167. Ephedrine hydrochloride-P. D. & Co. is supplied in the form of capsules containing respectively $\frac{3}{8}$ grain and $\frac{3}{4}$ grain. Parke, Davis & Co., Detroit.

Thio-Bismol.—Sodium bismuth thioglycollate. A salt formed by the interaction of sodium thioglycollate and bismuth hydroxide containing approximately 38 per cent of bismuth. Thio-bismol is proposed as a means of obtaining the systemic effects of bismuth in the treatment of syphilis (Bismuth Compounds, New and Non-official Remedies, 1930, page 94); it is a water-soluble compound, readily absorbable, and produces relatively little local injury. The product is supplied in the form of ampules containing 0.2 gm. of thio-bismol. Parke, Davis & Co., Detroit. (Jour. A. M. A., July 19, 1930, p. 200.)

PROPAGANDA FOR REFORM

Rickets and Vitamin D.—Without detracting in the least from the merited value of viosterol in the treatment of rickets, certain recent investigations raise a question as to the simplicity of the pathogenesis of rickets implied in the current use of viosterol. It has been pointed out recently that, whereas both viosterol and cod liver oil are extremely efficacious in curing rickets, only the latter contains in addition the indispensable Vitamin A. Although the most obvious function of calcium and phosphorus is in the building of bones, there are other demands for these mineral elements which,

at times, become of great importance and it has been shown that, whereas Vitamin D is concerned with the calcification of bones, the retention of calcium and phosphorus in the body is largely a function of the level of these materials in the diet. A comparison of the efficacy of cod liver oil and of viosterol as prophylactic antirachitic agents showed that of 123 children given viosterol 29 per cent were not protected against rickets, while of 100 given cod liver oil 3 per cent showed rickets, although the former group received twice the number of units of Vitamin D given the latter group. (Jour. A. M. A., July 5, 1930, p. 38.)

Therapy with Ovarian Preparations.—The Council on Pharmacy and Chemistry sponsors the following statement on therapy with ovarian preparations in the current (1930) edition of New and Non-official Remedies: "Rational as ovarian therapy may theoretically appear to be in some conditions, the actual results are rarely striking, and often nil to the careful observer. It is altogether probable that the activity which may be presented by the fresh gland is not contained in a finished desiccated product, or else, when given by mouth, it is destroyed by the digestive juices; extensive clinical experience has failed to establish the value of desiccated preparations administered orally. There is considerable evidence that the aqueous extracts prepared for hypodermic use are inert . . . much work has been done toward the elaboration of a potent, standardized preparation of the ovary, and as a result of these investigations such potent standardized preparations for use by subcutaneous injection have become available. These preparations have been shown to induce estrus in mature animals and to induce sexual maturity in immature animals. Somewhat limited clinical evidence indicates their probable value in ovarian hypofunction." The Council has omitted all desiccated ovary preparations for oral administration on the ground that there is no adequate evidence for their value and, so far, has not accepted any ovarian hormone preparation, because the evidence for the value of these was considered inadequate. (Jour. A. M. A., July 5, 1930, p. 64.)

THE DOCTOR'S PRIVILEGE

"If a man wishes to be an honest-to-goodness doctor with the kind of an education that one should have to entitle him to care for the sick and to command the respect and confidence of the people, it is not only necessary for him to spend several thousand dollars but also seven hard working years of his life in order to acquire an education that will permit him to apply for a license to practice. He must then pay a fee to the State Licensing Board for an examination and if successful in passing pay another fee for his license which will permit him to practice only in the state from which he receives the license. In addition to this in many states he will have to pay an annual registration fee to the state and an annual registration fee to the federal government for a license that will permit him to prescribe or give something to a patient to relieve his pain. Nor is this all. In some states an annual occupation tax is levied on practicing physicians. This is the door through which a scientific physician must pass before he is allowed to practice his calling, but if one without the necessary preliminary educational requirements that are imposed on the physician wishes to practice some so-called system or cultism of his own, the door is as open and easy to find as that of the average speakeasy in a prohibition town."—From an address by M. L. Harris, M.D., Past-President of the American Medical Association, in the New York State Journal of Medicine.

COMMUNICATION

IMPRESSIONS OF THE B. M. A.

To the Editor:

The ninety-eighth annual meeting of the British Medical Association was held in Winnipeg, August 25 to 29. This was the third time the annual meeting has been held outside the British Isles, having been held in Toronto and Montreal in years past. The attendance was quite large, members being present from different parts of the British Empire; the greater portion was from western Canada. A number of American physicians attended the meeting, among them several delegates from the A. M. A., as well as the president, Dr. Gerry Morgan, President-elect, Dr. H. Starr Judd, and Vice-president Dr. Louis J. Hirschman. The total attendance was about 3,000.

The arrangements were most excellent, making it convenient to attend different sessions and functions.

The social side of the meeting was emphasized and it was strictly British—morning tea, high tea, afternoon tea! The social events of each day were placed on the bulletin board each morning and due attention was given to the hour.

The convention as a whole was carried out with marked dignity and conformity. The Britisher moves around easily with a poise that is not seen in the United States. When addressed he is gracefully courteous.

The scientific sessions were governed in a stately manner; each speaker was assigned a definite part and all were punctual. I think most visitors were impressed with the accuracy of each speaker in discussing his subject. There was no effort to build favorable statistics or stress successes. Each speaker told of his failures or non-success with earnestness. The listener was impressed with the honesty and sincerity of each paper, without effort to praise any individual; the conclusions were for the medical association.

The English surgeon does not take life strenuously; he is fond of social events. This can best be described by citing an instance in the section. A gentleman who was reading a paper stopped for a moment, looked at the time, turned to the chairman, saying, "This is a bit long—I have an engagement for lunch. If you don't mind I will complete it this afternoon," and departed. The chairman thought nothing of it.

An unusual and unique event was the Indian ceremony. Several Indian chiefs and their tribes were present for the occasion, whereby Lord Dawson of Penn, physician to King George, was made big chief medicine man to Indian chiefs. Chief Red Dog was master of ceremonies. Lord Dawson is now Kitche Akemow-O-Maskikie Akemow.

The Hon. R. B. Bennett, Premier of Canada, was present during the ceremony.

The annual dinner of the British Medical Association was given in the Hudson Bay Company building. Over 1,500 were present. Lord Moynihan, of Leeds, England, spoke for the association and British Empire.

ANGUS McLEAN.

Detroit.
Sept. 15, 1930.

FINDS NERVES MAY CAUSE EYESTRAIN

Eyestrain, so-called, is more apt to be the result of "nerves" than of any disease of the eyes, Dr. George S. Derby, of Boston, told members of the American Medical Association at Detroit. Dr. Derby described a number of cases he had seen in which the patient recovered from his eyestrain when his bodily condition was treated and when the psychologic cause of his eyestrain was explained and he was persuaded to use his eyes normally.

Dr. Derby suggested that the term eyestrain should be banished from our vocabulary.

"If the general public could learn that eyes are seldom strained, this would be a much happier world to live in," he said. "The fact of the matter is that the eye is provided with a large factor of safety and that healthy eyes do not become diseased even by excessive use."

Most of these cases of ocular neurosis, as Dr. Derby called it, are found in sensitive nervous persons. Fear is the commonest factor in these cases. Some ocular pain or discomfort makes the patient afraid that he is injuring his eyes permanently, that he cannot continue his occupation and perhaps will become dependent. Many of Dr. Derby's patients had given up their work and many pleasures, and were devoting themselves to resting their eyes as much as possible.

Dr. Derby asked ophthalmologists not to overlook the psychologic factor in causes of eyestrain, and to treat the mental condition of their patients as well as to correct their vision with eyeglasses.—Science Service.

PEPTIC ULCER

Arthur Dean Bevan, Chicago, concludes his review by stating that the field of peptic ulcer belongs to no one specialty. It belongs to and must be cultivated by many men: the general practitioner who will see first the great majority of the cases, the internist, the surgeon, the roentgenologist and the pathologist. No one group can claim this field exclusively as its own. There can be no just conflict between the internal management and the surgical treatment of these cases. The internist who can see little or no place for a consideration of the surgical treatment in 20 per cent of cases of peptic ulcer has a narrow conception of this field and is a menace to many of his patients. On the other hand, the operating surgeon who does not realize that 80 per cent of cases of peptic ulcer can be cured by good medical management may be a more serious menace to the patients that fall into his hands. The roentgenologist who believes that the diagnosis of peptic ulcer depends on roentgenologic observations alone and who independently desires to make the diagnosis on such evidence without a knowledge of the history and gross clinical picture is working at a great disadvantage. Clearly, this is a field for good teamwork and in this team there must be a number of workers: the general practitioner, the internist who is especially trained in stomach work, the surgeon, the roentgenologist and the pathologist. It is only in a clinic where such team-work has been developed that a patient with an ulcer of the stomach can receive the best treatment that modern scientific medicine has to offer. It is only by treating this problem as a piece of scientific research that we can hope to solve it.—Journal A. M. A.

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Contributors are responsible for all statements, conclusions and methods in presenting their subjects. Their views may or may not be in agreement with those of the editor. The aim, however, is to allow authors as great latitude as the general policy of The Journal and the demands on its space may permit. The right to reduce in length or to reject any articles is reserved. Articles are accepted for publication on condition that they are contributed solely to this Journal.

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OCTOBER, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

THE TUBERCULOSIS PROBLEM

There has been a steady decline in the tuberculosis death rate in the United States which has been accelerated doubtless by the various anti-tuberculosis crusades. Often we consider a problem solved after more or less spasmodic effort or by legislation, as in the case of some social problems, when the only mastery would seem to consist in vigorous and prolonged effort. There are still reported approximately 45,000 deaths annually from tuberculosis; in Michigan the disease occupies fifth place as a mortality factor. It has been demonstrated beyond gain-saying that tuberculosis is a preventable disease. Its control, however, is more difficult

in an industrial population than in states in which the population is largely rural. Among the reasons might be mentioned the fact that an industrial population is on the whole a young population. Housing conditions also are apt to be such as to render segregation and control difficult. Besides, the competition in the industrial world is largely responsible for poverty, under-nourishment, and, as we see today, unemployment.

Both state and county public health departments are functioning efficiently in the way of providing specialized hospital facilities, adequate milk inspection and public health education. The joint committee on Health Education, consisting of representatives from the Michigan State Medical Society with representatives from about a dozen other organizations, have spread enlightenment during the past decade. The work of enlightening the public not only in regard to the prevention of tuberculosis but other conditions affecting public and personal health must be carried on until the community becomes *intelligently* health conscious.

There is still a responsibility which rests with the physician in the matter of recognizing incipient cases. The symptoms of early pulmonary tuberculosis are so protean as easily to mislead. It is only by exhaustive and thorough examination that many of the very early cases can be diagnosed. A sputum examination with negative findings cannot be accepted as implying that the patient is free from the disease. An interview with patients in tuberculosis sanatoriums reveals the fact that many have visited several physicians before the disease was apprehended. Of course many do not consult a physician until their condition shows all the characteristic signs of the disease. In such cases the responsibility is the patient's alone.

It would be a good thing if it were universally a practice among physicians to look upon tuberculosis as a possibility in all ambulant cases in which the symptoms are obscure. Miller* goes on to say that if only one single precaution were taken in suspicious cases, that is, to have an X-ray examination of the chest made, it would save a large proportion of the mistakes now made. "If less reliance were put upon sputum examinations and less upon fine points of physical diagnosis of the chest and more on the story of the patient as a whole and on

*Why Do So Many Die of Tuberculosis? By J. A. Miller, M.D., New England Journal of Medicine, July 24, 1930.

the X-ray examination, it is certain that great progress would be made." We go farther; a great deal depends upon the technic in the making of radiographs as well as the skill and experience of the interpreter. An X-ray examination made in an indifferent way may be as misleading as a negative sputum examination. Probably in no other field is an X-ray examination when properly made so valuable as in the diagnosis of pathologic conditions within the thoracic cage.

THE LEGAL ASPECT OF X-RAY

This is the title of a paper in this number of the Journal. The paper was prepared by a roentgenologist of recognized standing in the profession who has gone to a great deal of pains in the matter of investigating the legal status of the X-ray. The article, it will be seen, contains a carefully selected bibliography for the reader who wishes to consult the original sources. Attention is also called to references in the Cornell Law Review which are valuable as presenting the legal aspect of the subject. The other sources are largely from the legal columns of medical publications.

The X-ray has come to be recognized as a very important feature of evidence, particularly in industrial and other accident cases. The radiograph, however, has its limitations and in the hands of one who is not an experienced roentgenologist these limitations are sometimes very great.

This paper was prepared at our request because we feel that the subject has a broad appeal not only to the medical profession but also to the legal profession who concern themselves with accident and other cases in which the X-rays are used as a means of evidence. We feel that this feature of the Journal will be widely appreciated by our readers. The contribution is not a medical paper in the ordinary sense of the term. Not only should it be of service to the industrial surgeon, but to everyone who may be called to give testimony in courts.

THE FREE CLINIC ABUSE

"The cure of the overcrowded out-patient department to which you referred last week is largely in the hands of the management of the hospital. It is the indiscriminate welcome accorded to all and sundry who apply for treatment that is at the root of the trouble. I would suggest that, except for emergencies, no patient be seen in an out-patient department unless he brings a letter from a doctor." Etc.

This is a letter written by a physician in London, England, to the Lancet. Poor human nature seems to be the same wherever one may go. The free clinics in Detroit and other large centers in this state are more crowded than they have been in recent years, if not than ever before. It is said that there are over 5,000 clinics in the United States and that thirty million people took advantage of the services rendered last year. Who can foretell the number of persons who will visit free clinics this year? "This very anomalous situation," writes M. L. Harris, Past President of the American Medical Association, "is due mainly to two causes: first, the inordinate propensity of the medical profession to bestow gratuitously its services whenever requested to do so, without attempting to analyze the situation to see whether the same is needed or even advisable, and, secondly, the proverbial readiness of people to accept service whenever it can be had for nothing."

A special committee on clinics was appointed last year by the Wayne County Medical Society. This committee, with Dr. D. J. Leithauser as chairman, made a thorough study of the clinic situation as it obtains in Wayne County. Their final report to the Society appeared in the Wayne County Medical Bulletin of July 29, 1930. The clinics are of two kinds, namely, tax supported clinics, that is those under the Department of Public Health and the Receiving Hospital; and Community Fund clinics, which include those in connection with the various hospitals. A total of 171,136 persons were cared for at these clinics and a total of 670,088 visits were made by patients to the clinics last year. A duplication of effort was found where patients chased around to several clinics, entailing, of course, duplication of physical examination, X-ray and laboratory examination as the case may be. This in part leads to an overcrowding of the clinics, placing an unnecessary burden on the physicians in charge. The committee report makes the emphatic conclusion that "many cases now in the dispensaries are well able to pay a private physician when only five visits are required in a period of one year. Especially is that true when it is found that many dispensary cases are required to pay their hospital bills when hospitalized."

The committee very properly scores some

of the large industrial institutions of the city, which, in their efforts to speed up production, bring to the city men from all over the country only to dismiss them during the dull season, to be supported by the taxpayer and the Community Fund.

As a solution the committee suggests:

(1) Establishment of a Central Investigating Bureau where all seeking dispensary service must first be thoroughly investigated to determine their earning power, resources, and the number of individuals depending upon their support.

(2) The Bureau to be centrally located and able to accommodate 100,000 yearly. This Bureau to be controlled by a board of directors representing the medical profession, Community Union and free clinics.

(3) Establishing a uniform questionnaire to determine those worthy of free service.

(4) The investigation to be conducted on the same principle as the City of Buffalo, where the applicant seeking charity signs an affidavit of his financial status.

(5) Those eligible, to receive a colored card designating the clinic desired.

(6) The colored card not transferable to any other clinic, unless recommended or advised by the physician in charge.

(7) Reinvestigation required every two or three months.

The recommendations of the committee are well worthy of consideration. It is a very serious state of affairs if one-tenth of the population of a great industrial city like Detroit has arrived at such a stage as to be objects of medical charity. According to the annual report of the Department of Public Welfare of Detroit for 1929, the number of cases obtaining relief was 13,083. This relief included provisions, rent, shoes, clothing, fuel and boarding care, transportation, burials, surgical supplies supplementary to mothers' pensions, and old age pensions. The amount of such aid was \$1,682,331.13. The Community Fund in addition to this averages 151 relief cases per month.

It will be seen that over eleven times as many persons sought free medical service as sought other necessities of existence. These statistics are of 1929. While data are not at hand regarding attendance at clinics the present year, all indications are to the effect, as we have intimated, that it is much greater

than ever before. There is great danger of people becoming "clinically minded," which would presage ill to the medical profession, and eventually react to the detriment of the people themselves. It would be better for all concerned were physicians to treat deserving cases free in their own office than to permit them to get into the habit of running to free clinics whenever they required medical care.

COOPERATIVE DIAGNOSTIC LABORATORIES

"The Council of the American Medical Association referred in its annual report to concerns known as 'coöperative diagnostic laboratories' in which practicing physicians participate as 'members.' Information available to the Council indicates that organization of these concerns is effected in such manner that control will lie in the hands of their promoters and directors and that practicing physicians identified with them must pay for 'membership.' These physicians are then expected to refer work to laboratories operated by the concern and, as a consideration for such reference, receive compensation varying in amount with the amount of work referred. The Judicial Council expressed the opinion that schemes of this kind are unethical and directly opposed to the interests of scientific medicine and of the public."—Bulletin American Medical Association.

MEDICAL HISTORY

A feature of the Journal of the Michigan State Medical Society for the coming year will be a series of contributions on medical history. Each month will appear a paper by a member of the Medical History Club of the Medical School of the University of Michigan. These papers are biographical and deal with the life and career of a master mind in medicine. This number contains a splendid contribution by Dr. Charles L. Hudson on William Beaumont, whom Osler named a "backwoods physiologist." Sketches of the lives of other noted American contributors to medical science will follow. These papers are not lengthy considering the subject, and it is hoped their conciseness as well as their splendid quality will render this a feature of this Journal that will be highly gratifying to its readers.

HE MAY NOT PRACTICE

In the September number of this Journal was noted the cancellation of license to practice medicine in this state of a recent medical graduate. It is almost inconceivable how a young man who has spent so much time, money and effort to qualify for the practice of medicine apparently knew no more than to sell his services to a quack concern and to lend himself to the exploitation of quackery. This young man is a graduate of a medical college having a very high standard. He had just completed his internship in a Detroit hospital and had been licensed to practice medicine only a year ago. We mention these facts to show that the young man's intellectual equipment for the practice of medicine was all that could be demanded by any State.

There was something, however, wanting and that is the moral qualification. Dishonesty is inexcusable in any walk of life. When it comes to deceiving sick and helpless men and women it is more than dishonesty; it is a crime.

In a recent number of Harpers Magazine appeared a very enlightening article on The Luxury of Integrity. During the times of financial depression there are found men who will stoop to actions of which they would not be guilty under normal circumstances. There are men and women with weak mental equipment who cannot stand adversity nor face the stern realities when the struggle calls for all that is best in them. Occasionally (let it be mentioned to their credit that it is only occasionally) a member of the medical profession compromises his integrity. There are lectures on the subject of medical ethics in many medical colleges. We believe, however, that the best lesson in medical ethics is the conduct of the teachers and clinicians with whom the medical student comes in contact. Every medical student during his four years in college and during his internship has had opportunity to learn from personal contact with his instructors the attitude of the medical profession toward such matters as abortion, quackery in its various phases, fee-splitting and other similar methods of exploiting the credulity of the public.

It is a regrettable circumstance when any physician is deprived of the right and privilege of maintaining himself through the performance of the duties incident to his

chosen profession. He has, however, no more right to pursue his calling dishonestly than has a felon to persist in his efforts to prey upon honest human beings.

OUR PRESIDENT—DR. R. C. STONE

Dr. R. C. Stone, of Battle Creek, is the President of the Michigan State Medical Society for the year 1930-1931. Both Dr. Stone and the Michigan State Medical Society are to be congratulated. Dr. Stone has been very popular with the medical profession, which has seen fit to keep him in office for many years, and he in turn has already rendered valuable service. He graduated from the Detroit College of Medicine in



DR. RAY C. STONE
President Michigan State Medical Society

1904, following which graduation he served internship at Children's Hospital, Detroit, and also Harper Hospital. Six years of his professional career have been devoted to general practice. During 1911 he spent a year in Berlin and Vienna and since his return to Battle Creek he has devoted his time to surgery. Dr. Stone has served on the Council of the Michigan State Medical Society for a period of ten years. He has been Chairman of the Council and member of the executive committee for several years.

The election to the presidency is a fitting

culmination for such a period of service to the Society. Probably never in the history of medicine of this state has the management of medical societies, whether state or county, demanded more time, more perseverance, more tact and diplomacy than at present as well as during the immediate past. Nor are we out of the wilderness yet. The scientific problems of medicine have demanded scholarship and perseverance. There are many scientific problems yet awaiting solution. The time has come, however, when the profession must emphasize the social and economic phases of the care of the sick. This is necessary in the interest of those who are so unfortunate as to be afflicted, as well as for the medical profession itself.

The amendment of the constitution providing for the election by the House of Delegates of a president-elect enables that officer to get in training for a year before assuming the position of president. This is a distinct advantage. The President-Elect, Dr. C. L. Moll, of Flint, Michigan, is likewise a wise choice. We can rest assured that the Michigan State Medical Society will continue as in the past to render efficient service.

THE MODERN OATH OF HIPPOCRATES

I swear by the gods and goddesses of Moolah, Hokum, and a couple of others, that I will practice medicine, not as I have been taught, but as the public would have me practice; that I will send bills only once a year and for small amounts, and if paying these bills interferes with the purchase of such essentials as an automobile, radio, piano, or fur coat, I will not require payment; that I will affiliate with some large clinic and utilize my time and endeavors for the free care of patients even though they could easily pay for medical attention; that I will get up at all hours of the night, however unnecessary it may be; that I will not attempt to force my patients to do what I think best, but treat them the way their neighbors suggest; that I will always tell the patient what his ailment is, and particularly, in the case of social disease, with untiring effort, I will notify wife or husband, children, father, and mother, and all other relatives and neighbors; that in cases requiring immediate surgical attention, I will not force the issue, but will let my patient wait as long as he cares to, and if he dies I will take the blame; I will sell my car and home, do away with expensive office furniture, discontinue buying medical books and literature, and in every way cut down my expenses so that I can live, however uncomfortably, without charging my patients anything but minimal sums; and that furthermore I will take no vacations or indulge in any form of amusement in order that I may be at all times at the call of my patients; and finally, with all of the above means to help me, should I not be able to make a living, I will not press my patients for aid, but will secure a position as bell-boy or street cleaner where my education will be of a decided advantage in promulgating rapid progress towards the acme of existence. Yo Hum.—Purloined from the sporting page of the Journal A. M. A.

THE INSURANCE COMPANIES AND THE DOCTOR

"These are but a few of the activities displayed by a legal salient of the besieging forces. Closely allied with the legal forces, particularly the workman's compensation laws, are the casualty insurance companies that assume the financial obligations of the employers. These not only claim the right to have their own doctor take care of the injured but also the right to dictate the fees that any other doctor who may be taking care of the case shall charge for his services, but neither of these rights can be sustained. It is the policy of many of these insurance companies to make arrangement for the care of their patients with a hospital that will give them the lowest rates and these rates requested are often lower than the average per diem cost to the hospital. An endeavor is also made, and it has succeeded in some states, to have the rates that a hospital may charge industrial cases, fixed by law. No hospital should make rates for this class of cases that are below the per diem cost nor should a hospital permit such cases to be entered as ward patients and assigned to members of the attending staff who are not allowed to charge for ward patients."—From an address by M. L. Harris, M.D., Past-President of the American Medical Association, in the New York State Journal of Medicine.

"GOOD WINE NEEDS NO BUSH"

"The origin of the inn-sign lies, of course, in the illiteracy of the people. It was useless for a trader to have his name and business inscribed upon his premises in days when so few people could read them. So the barber-surgeon put out a multi-colored pole, representing a limb swathed in bandages; the banker put out the three golden balls of Lombardy; the grocer put out a dummy sugar-loaf; the mercer put out a stockinged leg; the goldsmith put out a golden arm holding a gold-beater's mallet; the armourer a knife; the tobacconist a dummy roll of raw tobacco; and so on. The oldest of all inn-signs is that of the Bush, since the bush—a clump of ivy and vine-leaves, symbolical of Bacchus—was the sign by which the very earliest ale-houses were distinguished from adjoining cottages. This sign was the basis of a proverb that much puzzled my childish mind. The house that sold good ale was in little need of this sign; if Mother Rummyng kept good ale her house would become known without any help from the projecting bush; hence 'Good wine needs no bush,' which used to be found in all copy-books. But as 'bush' conveyed nothing to me but a hiding-place, I found the statement meaningless. It seemed to me that if a man wanted to hide any wine at all, he would hide his good wine and push forward his bad. I was equally puzzled by the statement that wine-houses sold 'wine from the wood,' and could not understand why grapes grown in a forest should be better than grapes grown on a hill-side."—From "The English Inn," by Thomas Burke.

STATE MEDICINE

(A Letter in the London Times)

Sir:—So much has been said and published on the subject of laxity in certification by doctors under the National Health Insurance regulations, and about the enormously increased demands on the Sickness Benefit Funds, that you may consider it worth while to publish the following personal experience. It appears to be an admirable illustration in miniature of one of the difficulties of the present situation.

I took over a new practice early in May. Soon thereafter a patient called and informed me that he had been "on the panel" for some years. When I examined him I failed to find sufficient clinical

grounds on which to feel satisfied that he was totally incapacitated as required by the regulations. Being unwilling to refuse certificates which had been granted by three of my predecessors, I referred the patient to the Regional Medical Officer, who examined him afresh and then concurred in my opinion. Accordingly, I refused any further certificates.

At that time I had seven persons from the small village whence the patient came on my panel list. Today, some six weeks later, I have two. Very shortly I shall probably have none. No one of the other patients who have transferred has been seen by me.

Such an experience gives one to think. Is honesty really the best policy, as our copy-books used to inform us? Sooner or later service under the National Health Insurance Acts must be made a whole-time employment and the doctor thereby removed from his present position of being at the mercy of disgruntled individuals, if certification is to be on a sound basis. "Free choice of doctor" has become a fetish which is due for destruction. So far as I am aware, men in the Navy, Army, Air Forces, and Post Office have no choice in the matter, yet one hears of no grievance on that account.

Yours faithfully,

July 26.

PANEL PRACTITIONER.

WE HOPE HE GOT WELL TANNED

We pity the physician who early in life has not learned to play, and who does not continue to play occasionally throughout his career. We believe that hard work and plenty of it, coupled with the consistent practice of rendering the best service possible, and at all times aiming to keep abreast of the times through reading and post-graduate work, should be the aim of every physician. However, the old adage, "All work and no play makes Jack a dull boy," applies to physicians, and altogether too often the physician, whether he has a large practice or not, keeps his nose to the grindstone to the detriment of himself, his family and his patrons. Two or three short vacations within each year will give him renewed interest in his work and better fit him for his arduous duties. The vacations must be real vacations, when medical practice is forgotten entirely. The vacation may be with rod, gun, golf club, or spent in traveling, depending upon the taste of the physician, but it should be planned to divert him from his regular vocation and give him a change of scene and surroundings. The editor's pet vacation hobby is a visit to the wilds of Canada, miles away from human habitation, even away from mail, telephone or telegraph. There on lakes and streams, with fishing equipment, and accompanied by the good wife, who also loves such an outing, two weeks of the finest sport in the world is enjoyed at least once a year. A couple of experienced guides do the heavy work of paddling the canoes, carrying luggage over the portages, and the work of the camp. Thus the entire time is devoted to rest and recreation, with the inevitable result of furnishing new activity and interest in professional work upon return to civilization. Some physicians may say that they cannot stand the expense, but we do not believe any yarns like that, for a real vacation or outing can be made very inexpensive, and, if need be, it can be near home, though we really feel that an entire change of surroundings is better. That such a vacation pays in dollars and cents as well as in improved health and spirits has been proved over and over again by the experience of those who early in life have seen the beneficial effects of such vacations. Work while you work and play while you play, but don't spend your whole time at either.—Indiana State Medical Journal.

DEATHS

DR. CHARLES C. HUBLY

Dr. Charles C. Hubly died at his home, Battle Creek, Mich., August 21, 1930. He was born in Davenport, Iowa, January 28, 1878. Graduating in medicine at the American Medical Missionary College in Chicago, in 1904, he practiced for several years in New Windsor, Illinois. In 1912 he joined the staff of the Sanitarium in the department of internal medicine and developed his specialty in the treatment of metabolic diseases. Surviving relatives are a daughter, Ada C. Hubly, and two sons, James W. Hubly, a senior in the medical department at the University of Michigan, and John D. Hubly, a student at Ann Arbor, as well as a brother, Robert C. Hubly, of Tacoma, Washington. He was a member of the Calhoun Medical Society, Michigan State Medical Society and a fellow of the American Medical Association. Dr. Hubly, from the outset of his career, was a hard worker. He was affable, kind, generous, and inspired the thousands of patients who passed through his hands with hope and confidence.—Calhoun County Medical Society Bulletin.

DR. ROBERT VINCENT GALLAGHER

Dr. Robert Vincent Gallagher died at his home, Battle Creek, Michigan, August 23, 1930. He was born at Delta, Michigan, September 22, 1870. He was a graduate of the University of Illinois Medical School, class of 1902. He practiced general medicine at Lacy, later at Dowling, Michigan, coming to Battle Creek in 1910. He saw service in the late war from 1917 to 1919, and held a captain's commission in the medical corps. His war service covered work in the aviation branch at the Selfridge Field, Ithaca Air School, Penn Field at Austin, Texas; Kelly Field, and Newport News, Virginia. He was twice married. In 1903 to Iva VanSycle, of Lacy. From that union a son, John E., and a daughter, Margaret, survive. His second wife was Miss Marjorie Hooper, of Battle Creek, who also survives. He also leaves a brother and two sisters. He was a member of the Calhoun County Medical Society and served as its president last year. He was also a member of the Michigan State Medical Society and American Medical Association.—Calhoun County Medical Society Bulletin.

DR. GEORGE HALE

Dr. George Hale of Detroit died suddenly Sunday, August 31. He had been ill only two days. Dr. Hale was born in Dayton, Ohio, in 1879. He was a graduate of the Detroit College of Medicine and had practiced in Detroit sixteen years. Dr. Hale was active in fraternal organizations. He is survived by his wife and by one sister, Mrs. Grace Charge of Dayton, Ohio.

"Medicine is a subject slowly evolving out of a past in which facts and fancies, faiths and beliefs, and even superstitions, were strangely commingled. During the past few centuries it has been gradually shedding many of these beliefs and is daily becoming more exact in its methods, and basing its practice more on reason and less on faith."

—SIR JAMES MACKENZIE.

SOCIETY ACTIVITY

110TH ANNUAL SESSION

Because the Journal goes to press on the twenty-second it is an impossibility to incorporate the minutes of our annual meeting in this issue. The complete report will appear in the November issue.

There were over five hundred in attendance. The House of Delegates adopted the new constitution and by-laws. Pontiac was selected as the place for the 1931 annual session. A Cancer Committee was created. A new section on Dermatology was created. Two new Councilor Districts were created. A committee was appointed to study the question of annual registration of physicians.

The local profession were cordial hosts and provided for our every comfort. All sessions were well attended and universal satisfaction was expressed by all in attendance.

The following officers were elected:

OFFICERS	
President.....	Ray C. Stone, M.D., Battle Creek
President-elect.....	Carl F. Moll, M.D., Flint
Treasurer.....	John R. Rogers, Grand Rapids
Secretary.....	Frederick C. Warnshuis, Grand Rapids
Editor.....	J. H. Dempster, Detroit

COUNCIL	
B. R. Corbus, M.D.....	Chairman
Henry Cook, M.D.....	Vice-chairman
Henry R. Carstens, M.D.....	1st District A, Detroit
A. S. Brunk, M.D.....	1st District B, Detroit
J. E. McIntyre, M.D.....	2nd District, Lansing
George C. Hafford, M.D.....	3rd District, Albion
C. E. Boys, M.D.....	4th District, Kalamazoo
B. R. Corbus, M.D.....	5th District, Grand Rapids
Henry Cook, M.D.....	6th District, Flint
T. F. Heavenrich, M.D.....	7th District, Port Huron
Julius Powers, M.D.....	8th District, Saginaw
O. L. Ricker, M.D.....	9th District, Cadillac
Paul R. Urmston, M.D.....	10th District, Bay City
Geo. L. Le Fevre, M.D.....	11th District, Muskegon
Richard Burke, M.D.....	12th District, Palmer
B. H. Van Leuven, M.D.....	13th District, Petoskey
J. D. Bruce, M.D.....	14th District, Ann Arbor
C. A. Neafie, M.D.....	15th District, Pontiac

MEDICAL PROFESSION AND PATERNALISTIC TENDENCIES OF TIMES

William Gerry Morgan, Washington, D. C., discusses the growth, decline and reincarnation of paternalism in government; paternalism in medicine, voluntary sickness insurance; compulsory sickness, state medicine; the public health movement, and nongovernmental paternalistic tendencies. He calls attention to these matters with a desire to arouse the individual members of the profession to a sense of responsibility in the concerted effort being made to forestall further encroachments on prerogatives which, by virtue of training and experience, belong to physicians as private citizens, members of an honored and honorable profession, whose duty is to the community they serve in their endeavor to prevent and to cure disease.—Journal A. M. A.

COUNTY SOCIETIES

KALAMAZOO ACADEMY OF MEDICINE

The June meeting of the Kalamazoo Academy of Medicine was held at the Gull Lake home of Dr. Rush McNair. The regular meeting was preceded by a coöperative dinner provided by the wives of the members.

The minutes of the May meeting as printed in the Bulletin were approved.

Committee reports.
Legislative—Dr. L. J. Crum recently attended a legislative committee meeting in Ann Arbor at which Dr. Lundwall proposed only defensive moves for this period, i.e., opposing cults' bills, later presenting something constructive, possibly something like New York's licensing board. Dr. Crum discussed the proposal of the state legislative committee that each county society do its share in supporting candidates who are favorable to desired legislation.

A motion was carried giving the present chairman of our legislative committee power to appoint a larger committee to coöperate in this matter of legislation, to formulate a plan and present it at our next meeting.

Communications were read.
Application for membership of Dr. Richard F. Weirich of Marcellus, Mich., was read.

Dr. J. B. Jackson moved that the Academy of Medicine instruct its delegates to the State meeting, to invite the State Society to have their next meeting in Kalamazoo. Seconded. Carried.

Dr. J. B. Jackson moved that the program committee be given authority to change the date of our regular September meeting so that it will not conflict with the State Society Meeting in Benton Harbor. Seconded. Carried.

Dr. D. K. Rose, Assistant Professor of Genito-urinary Surgery in Washington University gave a paper on the "Differential Diagnosis of Hypertrophic Prostate and Neurogenic Bladder."

Before adjourning a vote of thanks was extended to Dr. and Mrs. McNair for the very enjoyable time as their guests.

CALHOUN COUNTY

The June meeting of the Calhoun County Medical Society was held at the Post Tavern, Tuesday, June 3rd. A dinner preceded the meeting. At 7:45 the president, Dr. Wilfred Haughey, called the meeting to order. The minutes of the last meeting, as printed in Bulletin Vol. 12, No. 5, were approved. Under communications: A telegram from Dr. F. C. Warnshuis sent to the secretary of the society, asking for a blanket endorsement to Governor Green of the state council's recommendation for a state commissioner of health, was read. No action was taken on this, however, as the society seemed in favor of waiting to see who was recommended by the council before giving its endorsement. A communication was also read from the Bureau of Education of A. M. A. asking for us to coöperate in a plan looking toward the systematic education of the public in health matters through the medium of local broadcasting stations, and asked that we endorse the plan and appoint a committee to help in developing it. It was moved that we endorse the idea of health education through radio broadcasting, and that a committee of three be appointed by the president to work out the details. The motion was carried. The following were named to serve on a committee to arrange details of broadcasting public health talks:

Dr. H. F. Becker, Dr. R. C. Stone, Dr. H. B. Knapp.

The president also brought up the subject of establishing an orthopedic center in Battle Creek. This was done because of the excellent hospital facilities afforded in this city for the care of crippled children, and because of the hardships imposed upon those who at present are required to take the children to out-of-town clinics for this work. It was moved to appoint a committee to coöperate with the Rotary Club and the Calhoun County Crippled Children's Society in an endeavor to bring this about. The following committee was named in connection with the work of establishing an orthopedic center in Battle Creek: Dr. A. C. Selmon, Dr. N. H. Amos, Dr. C. W. Brainard.

The following bills were approved for payment:

Flowers	\$10.00
Secretary's expense.....	7.20
A. M. A.....	.60

The essayist of the evening, Dr. Walter Wilson, of Detroit, was introduced. He gave a very interesting paper on the subject of inflammatory rheumatism with heart complications. His paper was based on the analysis of one hundred cases of rheumatism studied by himself in St. Mary's Hospital, Detroit. He also referred to the study made by Dr. Carey F. Coombs, of Bristol, England, who was able to study ninety-seven autopsies out of his one hundred cases. As to the etiologic factor in rheumatism, no absolute proof of a specific germ has been demonstrated, but various forms of streptococci seem to be the chief factors. It most likely will be found to be a strain of hemolytic streptococcus.

Some people seem to be extremely susceptible to this infection and heredity and hygiene play an important part. Rheumatic fever causes, not only endocarditis, but myocarditis and pericarditis as well, frequently Aschoff's nodules being found in the heart muscle. Of the ninety-seven cases Coombs posted, the mitral valve was affected in 100 per cent, aortic valve in 57 per cent, tricuspid valve in 35 per cent, and the pulmonary valve in 2 per cent. The usual recovery from symptoms of rheumatism does not mean that the disease is really cured, as the cardiac changes usually appear some time after the rheumatism, shortly, or possibly ten or fifteen years later.

He stressed the importance of a long period of rest and observation with periodic white cell counts, in order to check up on the possibility of endocardial changes. This observation should extend over a period of at least a year. The management of inflammatory rheumatism cases after recovery is most important. He illustrated his talk with a few stereopticon slides, giving case reports and showing electro-cardiograms. He urged the importance of taking great care in the after-treatment of this disease, in view of the fact that it so often occurs in the early decades of life and is therefore capable of producing disability throughout life. He is of the opinion that the ultimate cure of inflammatory rheumatism is as difficult as the ultimate cure of syphilis.

In the discussion many interesting points were brought out by Drs. Eggleston, Mortenson, Giddings and Capron. Dr. Chester, of Detroit, was a visiting physician.

Dr. Mortenson stated that the tonsillitis child is a potential rheumatic or heart case, and may develop a heart disease late after rheumatic fever. A crippled, diseased heart in a young adult should be the guide as to occupation. He is of the opinion that the responsibility of treating rheumatic heart cases in the young adult is more important than the treatment of cardiac cases later on in life, when

occupation and career of the patient are not of so much importance.

Dr. Wilson's subject and method of handling cases was well received and eagerly listened to.

Members present, 50.

HARRY B. KNAPP, *Secretary*.

GRAND TRAVERSE-LEELANAU COUNTY

The annual summer picnic meeting of the Grand Traverse-Leelanau County Medical Society was held Tuesday, August 12, 1930, at the cottage of Dr. E. F. Sladek on Long Lake.

The hosts, Dr. and Mrs. H. B. Kyselka and Dr. and Mrs. E. F. Sladek, served a very bounteous "bohemian" dinner to the following members: Drs. Gauntlett, F. Holdsworth, M. Holdsworth, Inch, Kyselka, Lawton, Minor, Rinear, Sheets, Sladek, Swartz, Thirlby, Way, Brownson, Hastings, Murphy, Smiseth, and Huston; and as guests: Drs. Cyrus C. Sturgis, Frederick Collier, J. O. Bevis, A. C. Kerly, Arthur Abt, Scott, Sauer, W. Sladek, and K. Brownson.

Following dinner, Dr. Cyrus C. Sturgis of the Simpson Memorial Institute at Ann Arbor, gave a very interesting talk on the "Treatment of Pernicious Anemia," illustrated with lantern slides.

Dr. E. F. Sladek was elected delegate to the State Society meeting at Benton Harbor; Dr. J. W. Gauntlett as alternate.

A rising vote of thanks was tendered the hosts, and the meeting adjourned for further refreshments.

E. F. SLADEK, *Secretary*.

SHIAWASSEE COUNTY

The September meeting of the Shiawassee County Medical Society was held at Memorial Hospital, Owosso, on the eleventh, with a large attendance of members and visitors.

Dr. A. L. Arnold, Jr., exhibited a film entitled, "Treatment of Normal Breech Presentations," which was very interesting.

Dr. R. J. Bailey, of Chesaning, was proposed for membership and accepted by the society.

Dr. T. Y. Ho, of St. Johns, secretary-treasurer of Clinton County Medical Society, was among the visitors present.

This society visited the State Department of Health at Lansing in June, and were finely entertained by the members of the Staff.

W. E. WARD, *Secretary-Treasurer*.

PERINEPHRIC ABCESS AND FISTULA FORMATION IN CONNECTION WITH GALLBLADDER

Perinephric abscess is generally described as developing by one of three routes: (1) by metastases from a peripheral suppuration; (2) as a result of a perforated renal focus; (3) by contiguity with an infected retroperitoneal organ. The classic and common etiology is the so-called metastatic, while infection by extension from adjacent organs is rare (retrocecal appendix, ulcerated carcinoma). G. E. Gruenfeld and Emanuel Sigoloff, St. Louis, observed two cases of acute and recurrent suppuration of the perirenal tissue in which the source of infection was assumed to be a diseased gallbladder. These two cases differ in their pathogenesis in certain important features, but they present the same diagnostic problem. They found that the intimate topographic relationship between the duodenum and the right kidney is a potential source of surgical complication and it will often be extremely difficult to decide which organ was the primary offender.—*Journal A. M. A.*

GENERAL NEWS AND ANNOUNCEMENTS

Dr. J. E. G. Waddington of Detroit spent the summer in Germany and Russia.

Dr. Robert H. Baker of Pontiac has returned from a two months' sojourn in Europe.

Dr. A. W. Karch of Monroe, Michigan, was married to Miss Catherine Houghton July 23.

The minutes of the House of Delegates will appear in the November number of the JOURNAL M.S.M.S.

Dr. W. J. Stapleton of Detroit and family, who have been touring central Europe since June arrived home on September 20.

According to the Detroit Free Press the sum of \$5,640,000 has been appropriated and is being spent to dole out relief in the city of Detroit the current year.

The Bulletin of the Oakland County Medical Society reports the new Pontiac General Hospital as nearing completion, which is anticipated about November 1.

Dr. Harry M. Nelson, formerly with the Henry Ford Hospital, has opened offices in the Fisher Building, Detroit, where he will confine his practice to Obstetrics and Gynecology.

About fifty British physicians visited Detroit on Labor Day, when they were the guests of the Board of Health; the objective was the inspection of the new tuberculosis unit of the Herman Kiefer Hospital.

A clinic under the auspices of the Couzens Fund is to be held October 9 at Traverse City. The decision to hold the clinic has come too late to enable the JOURNAL to go into particulars in regard to the program.

The annual conference of secretaries of the various state medical societies will be held at the American Medical Association Building, Chicago, November 14 and 15. This conference includes also editors of state medical journals.

Dr. William M. Clift of Grosse Ile had a narrow escape from drowning September 1. The speed boat in which he and his two sons were riding caught fire between Grosse Ile and Stony Island about half a mile from the shore. The doctor, unable to swim, was rescued by his two sons, Dunham, age 18 years, and William, age 16.

The Wayne County Medical Society opened its 1930-1931 session on the evening of September 23. Dr. Frederick A. Collier, Professor of Surgery of the University of Michigan, addressed the Society on Post-Operative Pulmonary Complications. There was a very good attendance and the meeting started sharp on time. A good beginning. May it continue throughout the year.

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons held their forty-third annual meeting at Niagara Falls, Ontario, on the same dates as the annual meeting of the Michigan State Medical Society. Among those of our members who took part were Dr. James E. Davis and Dr. H. Wellington Yates of Detroit. Dr. James E. Davis is secretary to the organization.

Dr. and Mrs. J. D. Bruce and Dr. and Mrs. Wile of Ann Arbor returned the end of August from a sojourn in England and Scotland, as well as on the continent. While abroad Dr. Bruce had occasion to study conditions in Great Britain as they pertain to medical practice. We hope to publish his experiences and reactions to the medical situation in the parts of Europe visited in a near future number.

The Bulletin of the Wayne County Medical Society appears in the twenty-second volume under the editorship of Dr. W. S. Reveno and Mr. William J. Burns as managing editor. The new cover design is simple and attractive. Dr. Reveno has had long, though somewhat sporadic, experience as editor. His first experience was during the presidency of the Wayne County Medical Society of Dr. James E. Davis in 1922. He has served as editor of the Bulletin under several presidents since that time.

DR. C. B. BURR HONORED

A complimentary dinner was tendered Dr. C. B. Burr of Flint, on September 16 at the Hotel Vincent, Benton Harbor, where fifty guests were present. A complete report of this dinner and presentation to Dr. Burr will appear in the November number of this Journal. Suffice it that the dinner was tendered to the author and editor of the Medical History of Michigan on the completion and publication of this monumental work. At the medical convocation held at the University of Michigan, September 29, the honorary degree of M.A. was conferred upon Dr. Burr.

Fourteen different physicians supplied the thirty-five children from four to eighteen years of age, for the Diabetic Camp at Ore Lake, which closed Saturday, August 16th, near Brighton, Michigan. These children were under the constant care of two physicians, two nurses, and a dietitian. The recreation activities were supervised by five members of the Water Safety division of the Detroit Chapter of the American Red Cross under the direction of Mrs. William H. Cary, Jr. It was very gratifying to return these children to their homes improved in spirit with their Insulin dosage reduced or their diet materially increased, without accident, illness or injury. The Camp was a success and we hope to have another Camp next year.

The following resolution from the Board of Trustees of the American Medical Association was tendered Robert Oakman and Dr. Angus McLean of Detroit. The resolution is in regard to entertainment on board Robert Oakman's yacht on which the annual meeting of the Board of Trustees of the A. M. A. was held during the Detroit meeting.

Resolved, that the Board of Trustees of the American Medical Association express to Admiral Bob Oakman and to Dr. Angus McLean its sincere appreciation of their cordial hospitality and their friendship as expressed by their provision of the

trip aboard the "Mamie O" and the marvelous repast contributed for their meeting of the Board.

Edward B. Heckel	A. R. Mitchell
Rock Sleyster	Chester Brown
Joseph A. Pettit	J. H. J. Upham
J. H. Walsh	Allen H. Bruce
Thomas Scillen	

THANKS TO GOLF

It took a golf tournament to reveal to many of our members that there are others engaged in the same line of work and subject to the same problems as they are.

With doctors as individualistic as they are, group affairs of this sort are highly essential in that they serve to initiate better understanding and closer affiliation among them. For this reason, the First Annual Golf Tournament successfully carried through by Bill Burns and Dr. R. C. Jamieson's Committee, will go down in the annals of the Society as among the rare occasions when doctors shed their cold reserve and professional dignity and really mixed it. The benefits to be derived are sufficiently obvious to make the holding of such events of frequent occurrence. If a golf tournament can initiate closer ties among doctors and eventually make enough of them come out of their shells so that there might be more of a meeting of minds than there is at present, then we ought to play a lot of golf. Thanks is due to the many friends of the Society for the excellent array of trophies and prizes they donated and which assured the success of the First Annual Golf Tournament.—Wayne County Medical Bulletin.

THE HIGHLAND PARK PHYSICIANS CLUB

The fifth annual clinic of the Highland Park Physicians Club will be held Thursday, December 4, 1930, at the Highland Park General Hospital. Among those expected to take part are: Dr. Samuel Wyllis Bandler, F.A.C.S., Gynecologist at the Post-Graduate Hospital, New York City; Dr. William Alason White, Professor of Psychiatry, George Washington University, and Professor of Mental and Nervous Diseases; Dr. Dean D. Lewis, F.A.C.S., Professor of Surgery at Johns Hopkins University, Baltimore, Md.; Dr. Ernest E. Irons, Dean and Clinical Professor of Medicine, Rush Medical College; Dr. Max Minor Peet, F.A.C.S., Professor of Neuro-Surgery, University of Michigan, Ann Arbor; Dr. P. A. Jacobs, F.A.C.S., Urologist, Mt. Sinai Hospital, Cleveland, Ohio; Dr. Charles S. White, F.A.C.S., Head in Surgery, George Washington University, Washington, D. C.; Dr. C. H. Nielson, Professor of Medicine, St. Louis University, St. Louis, Missouri; Dr. Goldsmith, Professor of Oto-laryngology, Toronto University, Toronto, Ontario; Dr. A. Primrose, F.A.C.S., F.R.C.S., Dean and Professor of Surgery, Toronto University, Toronto, Ontario.

The Program Committee, consisting of Drs. H. E. Northrup, chairman, C. C. Vardon, E. E. Poos, L. C. Reid, and R. B. Hasner, are striving to have a better clinic than has ever been presented in the State of Michigan.

This year the wives of the visiting doctors will be entertained by the wives of the Highland Park doctors.

A detailed scientific program as well as the program of entertainment will be printed in the next issue of the Journal. One of these programs will also be mailed to each member of the Michigan State Medical Society.

The women's entertainment will be under the able leadership of Mrs. C. C. Vardon, chairman.

THE STATUTE OF FRAUDS

WM. J. BURNS, LL.B.

This article was written by Mr. William J. Burns, who is executive secretary of the Wayne County Medical Society and managing editor of the Society's Bulletin. Mr. Burns was for a number of years manager of the Toledo Academy of Medicine. He came to Detroit last January to assume a similar position in connection with the Wayne County Medical Society. He has a legal education and is licensed to practice law in the State of Michigan. However, his entire time is devoted to the work of the Medical Society. The following paper on "frauds" appeared in the July 22nd number of the Bulletin of the Wayne County Medical Society and is here published by Mr. Burns' permission as well as that of the Bulletin. The subject is one with which the doctor is confronted sometime in his life in his business relations with patients.—Ed.

A physician dropped into our office last week and related the following facts:

"Eight months ago, I was called to attend Mr. M. N. O., who had sustained a Colles' fracture in the act of cleaning ice and snow from his father-in-law's sidewalk. M. N. O. hasn't paid me my fee, and I doubt if he intends to do so, though he enjoyed a perfect recovery. His father-in-law, however, told me months ago: 'If he doesn't pay his bill, I will.' Now, I'd like to start action against both M. N. O. and his father-in-law for the amount of the bill."

"Was the father-in-law's promise made in writing?" was the question asked the physician.

"No," answered the doctor; then he quickly added, "but it was made in the presence of three witnesses."

"The witnesses are of no value," it was necessary to inform him. "The law specifically states, in the Statute of Frauds, that such an agreement must be in writing, otherwise it is void. Your only recourse is against M. N. O. for services rendered."

"Well, by George," exclaimed the physician, "that's a damn queer law. It should be explained to every doctor in the United States so no one else will suffer my sad experience. The whole law of contracts should be aired to the medical profession."

CONTRACT DEFINED

A contract is an agreement, enforceable at law, between competent parties, for a valuable consideration, to do or to refrain from doing an act or number of acts. The elements of a contract are (1) offer and acceptance; (2) form and consideration; (3) competency of parties; (4) legality of object, and (5) genuineness of consent. In a word, a contract is a meeting of minds. In a modern world, however, the complexities of life often require a visible evidence of this meeting of minds. As a result, we have contracts in the solemn form of a deed of record, and again, we have simple contracts which, though not under seal, are required by law to be in writing. Among the latter are included contracts specifically mentioned in the Statute of Frauds.

THE STATUTE OF FRAUDS

The famous Statute of Frauds and Perjuries was first enacted in England in 1676. It was legislated as a means of preventing fraud and perjury by requiring, as a matter of evidence, written evidence as distinguished from oral evidence to prove certain contracts. The original Statute contained two sections—the Fourth and Seventeenth—which affected the form of certain simple contracts.

In nearly all the States, statutes containing provisions substantially similar to those of the English

Statute have been enacted. In Michigan, the common law Fourth Section is now known as Sections 11981 and 11977 of the General Code and the English Seventeenth Section is Section 11835 of the General Code. While physicians will be particularly interested only in the first subdivision of Section 11981, it will not be amiss to quote both these ancient laws as they now appear on the statute books of Michigan.

Section 11981 of the General Code of Michigan:

"In the following cases specified in this section, every agreement, contract and promise shall be void, unless such agreement, contract or promise, or some note of memorandum thereof be in writing and signed by the party to be charged therewith, or by some person by him thereunto lawfully authorized, that is to say:

"1. Every special promise to answer for the debt, default or misdoings of another person;

"2. Every agreement that, by its terms, is not to be performed in one year from the making thereof;

"3. Every agreement, promise or undertaking, made upon consideration of marriage, except mutual promises to marry;

"4. Every special promise made by an executor or administrator, to answer damages out of his own estate;

"5. Every agreement, promise or contract to pay any commission for or upon the sale of any interest in real estate."

Section 11977 of the General Code of Michigan:

"Every contract for the leasing for a longer period than one year, or for the sale of any lands, or any interest in lands, shall be void, unless the contract, or some note or memorandum thereof, be in writing, and signed by the party by whom the lease or sale is to be made, or by some person thereunto by him lawfully authorized by writing."

Section 11835 pertains to personal property:

"A contract to sell or a sale of any goods or choses in action of the value of one hundred dollars or upwards shall not be enforceable by action, unless the buyer shall accept part of the goods or choses in action so contracted to be sold or sold, and actually receive the same, or give something in earnest to bind the contract, or in part payment, or unless some note or memorandum in writing of the contract or sale be signed by the party to be charged, or his agent in that behalf."

PROMISE TO ANSWER FOR ANOTHER'S DEBT

In his ordinary routine practice, a physician will not be concerned with any portion of the laws quoted above, except the first subdivision of Section 11981. In colloquial English, this Statute reads: "You can't sue a person who promises to pay another's debt unless he promises in writing." Situations covering this point have arisen, are arising, and will continue to arise just as long as doctors render aid to the sick and injured. Physicians will receive promises, promises, promises, and all will float into thin air—unless the doctor is forewarned and forearmed.

ORIGINAL PROMISE AND COLLATERAL PROMISE

An original promise is never within the Statute of Frauds. The promise must be to answer for the debt of another; if the promisor is agreeing to pay his own debt, such promise is not covered by this law and need not be in writing.

The question, whether any promise is an original

undertaking, or collateral and conditional, is important and requires a few definitions to aid in its solution. There must be three (3) parties in contemplation, a surety, a principal debtor, and a creditor.

1. A surety is a person not liable before, who engages to be answerable for the debt of another. A surety promises to pay if the principal does not pay. A guarantor promises to pay if the principal cannot be made to pay.

2. A principal debtor is a person for whom the surety is answerable.

3. A creditor is a person for whom the surety engages.

4. Original promises involve cases in which the direct or leading object of the promisor is to further or promote some purpose or interest of his own, even though the benefit accrues to another than the promisor. (No writing is necessary to enforce such promise.)

5. Collateral promises involve cases in which such object is to become the surety or guarantor of the subsisting debt of another for which the promisor was not previously liable. (Such promises must be in writing, to be enforceable.)

ILLUSTRATIONS

If, for instance, two persons should come into a doctor's office, and one should receive a treatment, and the other, to gain credit for the patient, promises the physician, "If he does not pay you, I will," this is a collateral undertaking, and must be in writing; but if he says, "Give him medical attention, and I will pay," or "I will see you paid" and the physician extends credit to the promisor exclusively—as to a parent when treating a minor child—this is an original promise and no writing is required.

The Statute was intended to apply to promises made to the person to whom the debt is due, and in order to secure its payment to him.

Thus A owes Dr. X \$40.00 for services, and B agrees with the doctor that if he will forbear to sue A 10 days, he will pay the debt of A, and Dr. X waits accordingly; this promise is void, unless in writing. A is still liable to Dr. X, and would have remained liable for the debt, even if the agreement of B had been in writing.

It is to be noted that a husband's promise to answer for medical attention furnished his wife need not be in writing, as he is liable for her necessities; but a wife's promise to pay her husband's debt must be in writing.

BE PREPARED

In conclusion, it is suggested that physicians should beware of promises generally, but especially verbal promises to answer for the debt of another. The latter are worth nothing. That they are made in the presence of witnesses is valuable only to this extent: no man, whether he be swaggering braggadocio or not, enjoys losing countenance before his friends and acquaintances; if he boasts that he will pay the sick man's bill, the physician should be prepared to call his bluff. A paper should be produced for his signature. He will sign or suffer the derision of his friends. The document can be most simple. It can be a typewritten note. A supply should be in the possession of physicians for such emergencies. The note could read as follows:

July 10, 1930.

"For value received, I, Mr. A. Blank, promise to pay Dr. X the sum of \$35.00 for medical attention furnished M. N. O.

(Signed) "A. BLANK."

THE DOCTOR'S LIBRARY

A TEXT-BOOK OF HISTOLOGY ARRANGED UPON AN EMBRYOLOGICAL BASIS. By J. Lewis Bremer, M.D., Associate Professor of Histology at the Harvard Medical School. (Fourth edition of "Lewis and Stöhr"), 568 pages, 486 illustrations, 32 in color, \$6. P. Blakiston's Son & Co., Philadelphia.

The changes which Professor Bremer has introduced in the present edition of "Lewis and Stöhr" are largely improvements in presentation and accuracy. There are no extensive departures from the plan of the earlier editions and the book retains the same convenient size. It is to be regretted that so little stress is placed upon the physiological and cytological aspects of tissue study, but there is no doubt that the present edition will continue as the standard American work on histology in which the embryological basis of tissue structure is given prime emphasis. The scattered historical paragraphs by Professor Lewis are retained and lend much to the general interest of the study. The work is readable and is well indexed.

SEX GLANDS FUNCTION AND THE HUMAN LIFE. C. Leventis, M.D., Detroit, Mich. Cloth, 132 pages. Price, \$2.00.

Dr. Leventis has been in practice in Detroit since 1912. Before coming to Detroit he practised at Kyparissia and a year at Athens, Greece. He is a graduate in medicine of the University of Athens. The monograph is a complete description of what the author calls the gonadic "sero-endocrine," which is a serum prepared from the blood of the donkey. A detailed account is given of the indications, of preparation, administration and dosage. A number of cases are reported. The work concludes with a bibliography of twenty-four references.

ANEMIA DEATH RATE DROP SINCE LIVER TREATMENT SEEN

Fewer deaths from pernicious anemia have been reported since the treatment with liver or liver extract has become countrywide, statisticians of the Metropolitan Life Insurance Company have just found in a survey of vital statistics. This statistical proof bears out the impression of doctors and pathologists throughout the country.

It has been claimed that pathologists in medical schools are hampered in their teaching because they cannot find enough fresh material to show the medical students how this disease affects the various organs and parts of the body. Since the introduction of the treatment by Drs. George R. Minot and William P. Murphy of the Harvard Medical School, the deaths from the disease, and even cases of it, have become comparatively rare in the hospitals.

"Whether the use of liver or liver extracts will result in a permanent lowering of the death rate or only to a postponement of death from the disease remains to be seen from the data of individual case experience for subsequent years," the statisticians said.

Since 1926, when the liver treatment was first introduced, the mortality for whites has been reduced by about half between the ages of 55 and 74 years, when formerly the heaviest mortality from this disease occurred.—*Science Service*.

OF GENERAL MEDICAL AND SURGICAL INTEREST

NEW ANESTHETIC USED IN EYE SURGERY

Successful use of the new anesthetic, avertin, in certain kinds of eye operations is reported by Dr. W. H. Wilmer of the Johns Hopkins Hospital and University in a communication to the American Ophthalmological Society. Avertin is known chemically as tribromethanol. It was developed in Germany by Dr. Richard Willsträtter of Munich and Dr. Duisberg of Jena.

The new anesthetic has many advantages over ether and is equally safe for certain types of surgery. It is injected instead of being inhaled and is given while the patient is in his bed. He quickly falls into a deep sleep and awakens hours after the operation. The preliminary period of excitement and nervousness is eliminated, as well as a good bit of the post-operative pain and discomfort. Vomiting is infrequent after awakening from avertin anesthesia.

From the surgeon's viewpoint avertin has the added advantage of giving thorough relaxation and there is less bleeding. Pulse and breathing rate are only slightly changed and the blood pressure is lowered a little.

"Where general anesthesia is required, avertin is a safe and valuable addition to the list of drugs used in ophthalmic surgery," Dr. Wilmer said. He pointed out that avertin cannot be used safely where the patients are aged or very weak or when certain diseases are present.

The preparation and administration of the drug require the attention of a member of the hospital staff, either doctor or competent anesthetist, who must give most of his time to this duty.—*Science Service*.

MASKED HYPERTHYROIDISM

By the term masked hyperthyroidism Walter W. Hamburger and Morris W. Lev, Chicago, wish to designate a group of middle aged, apathetic men and women patients, suffering with thyrotoxicosis, in whom the classic signs and symptoms of hyperthyroidism are wanting but who present an atypical, clinical picture of some other type of disease, as organic heart disease, congestive heart failure, angina pectoris, diabetes mellitus or pernicious vomiting. This group bears a certain relation to the cases of "maladie de Basedow: forme frustes" discussed in the literature. The diagnosis of masked hyperthyroidism, in addition to the points mentioned, rests on a suggestive increased warmth, redness or pigmentation of the skin; slight staring expression of the eyes; increased restlessness; unexplained loss of weight; persistent increase in the basal metabolic rate; improvement or relief of symptoms, and decrease in the basal metabolic rate following iodine medication and thyroidectomy and the histologic appearance of the removed glands. It is important that this frequently undiagnosed or misdiagnosed group of cases be recognized, in spite of the difficulties in diagnosis. They report five illustrative cases.—*Journal A. M. A.*

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DR. C. B. BURR HONORED

THE UNIVERSITY OF MICHIGAN AND THE STATE MEDICAL SOCIETY RECOGNIZE HIS SERVICES

The University of Michigan has inaugurated what appears to be a most commendable procedure, namely, the granting of an honorary degree (M.A.) to some physician of outstanding ability or accomplishment in this state, at the fall convocation of students of the medical school. No more universally favored candidate than Dr. Burr could have been selected for the first conferring of the degree. Dr. Burr's successful completion of the Medical History of Michigan is too well known and appreciated to call for more than mention here.* Besides this he is an author in other fields, writing with a grace and ease that is peculiarly his own. He has been a life-long student, never having ceased to grow intellectually, though he is beyond the three score years and ten. A man of broad human sympathy and understanding, he might iterate the sentiment of the Latin poet, Terence, who proclaimed

himself a man and that nothing failed to interest him that pertained to humanity.

As for the university, an institution can confer no higher mark of recognition on a professional man than the awarding of an honorary degree in recognition of outstanding achievement. Fortunately, the recipient of such a degree, as a rule, values it more

*The March, 1930, number the Journal of the Michigan State Medical Society contains editorial reference to Dr. Burr's career.

highly than any other form of recognition that could be made.

Each year at the opening convocation of the medical school of the University, the candidate recommended for the honorary degree will deliver an appropriate address to the faculty, medical students and guests preceding the conferring of the degree. It goes without saying this innovation on the part of the University is a great step towards encouraging the higher things in medicine.—*Editor*.

In a brief address President Ruthven introduced the speaker of the occasion:

"I consider it a great honor and privilege to be permitted to preside at this, the eighty-first annual opening exercises of the Medical School of the University of Michigan.

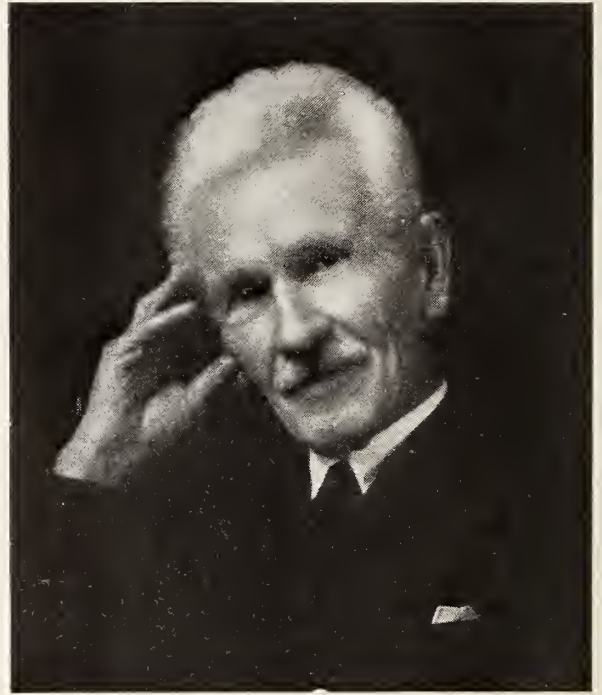
"This unit of the University has had a long and distinguished history. It is appropriate, therefore, that students and faculty should have great pride in the School and that they should honor in the observance such traditions as this one.

"To the students entering this year, permit me to extend a cordial welcome. It is our earnest hope that you will very soon acquire the Michigan spirit—a spirit of loyalty and devotion—a spirit which will lead you to give of your best to your profession, to the School, and to the University. Medicine may be practiced as a trade or as a profession, and there are doctors who call themselves professional men, and scientists who are essentially business men. Business is an honorable vocation, but you should understand that this Medical School is not a trade school. It stands for professional training in medicine and broad culture, not only thorough knowledge of a small sector but also an ability to comprehend and interrelate, and a willingness to sacrifice personal aggrandizement to service for humanity. In other words, no matter what material success you may achieve, only by being willing to work for the love of work and the good of society will you be happy here and make us proud of you after you leave college.

"We have secured as a speaker for this occasion a man known and respected in the profession. His attainments will later be recited, so I will introduce him simply as Colonel Bell Burr—physician, writer, and historian."

DR. BURR SPEAKS

Dr. Burr's address was in substance as follows. Referring to the medical school, he said:



DR. C. B. BURR

"There is immense credit due to the medical pioneers who blazed the trail, who visualized future needs and with courage laid foundation for that which has developed into such an admirable teaching institution." He mentioned Doctors Asa Gray, Abram Sager, Douglass Houghton, Silas H. Douglas, Zina Pitcher, and Moses Gunn.

"Cou'd the walls of the old and new medical buildings speak, they might justly say, 'that which has gone forth from this enclosure for four-score years has always been useful.'"

Telling the students that the problems with which they will be confronted when they enter practice are quite different from those of the generation of physicians to which he pertained, Dr. Burr said their, the latter's, problems were relatively simple in comparison.

"It is not at all unlikely that among your earliest cases, when you enter practice, will be a patient with a fractured skull and oozing brain, or crushed chest, or broken bones, a penetrating gunshot wound, lacerations of some of the viscera, or any combina-

tion of these. There was a war waged not long ago in which this country reluctantly participated, entering it at the eleventh hour to make the world safe for democracy. I then believed, and still believe, it was a war in self-defense. But whatever its purpose, the end mentioned was not attained. Insofar, at least, as this country is concerned, we are in worse case than when the first guns burst forth in Belgium.

"This country has not been made safe for democracy, aristocracy, or ochlocracy," he went on, "but it is apparently safer for the latter group than for any other, although the members of it are bumping each other off as fast as they can.

"I have recently written: 'Wanted, a war to make the world safe for speed and speculation,' and to that I might have added 'for noise and nonsense.' The present chaos in this country is not wholly attributable to war. As to what its one or more causes may be, people will differ, but I have my own personal opinion on the subject. The chaos is not attributable to war alone, because in other countries, England, for example, jails and prisons are being closed, and we are building, building, building, all the time. Danger stalks here on every hand, from banditry, from the reckless use of the automobile, and recently from the airplane, all of which indicates that without thorough equipment in surgical anatomy and in the use of surgical tools, the graduate of next year and the year after will be very much handicapped.

"Still I recommend that the recent graduate start out in an approximation of what was formerly called general practice, doing all the things he can do well, justly toward his patients, and perhaps in the end drifting into some special line to which he may find himself particularly adapted.

"There are several specialties now in which there will be plenty to do. Roentgenology, otology, and psychiatry, for example, because, in first case, of broken bones, and, in the second, of adjustment to unnecessary noises made by the procession of automobiles from Sillyville, honking every minute of the way, the radio barker and jazz, all of which we are pleased to call progress.

"In psychiatry there will also be a-plenty, but here it will be much more difficult than in times gone by, because of the self-indul-

gent lives people are leading, lolling on automobile cushions and on flowery beds of ease. There also is a lack of self-discipline and restraint, all of which will make them impatient rather than patients.

No person is indispensable. There are material things that are indispensable—as food, clothing, oxygen—but members of the human family, never.

"Do not be afraid or dismayed, and do your part in the restoration of old-fashioned psychology, where cheerfulness, hopefulness—but not self-cheating—tolerance, reciprocity and conscientiousness, may come back into their own. Above all things work diligently, have courage—not audacity—and stick it out.

"The State Medical Society recently presented me an exquisite souvenir; upon the glassware was the design of a rider, his horse leaping an obstacle. This reminded my former secretary of a jingle which once appeared under a cartoon of Colonel Roosevelt, in cowboy costume, mounted on a bronco, tearing madly along the highway. On the other side of an adjoining fence was the figure of a man whose countenance betrayed serious misgiving. And this was the jingle:

"A man on a horse came riding by
Sez I, 'Your horse will surely die,'
'Well if he does I'll tan his skin
And if he don't I'll ride him agin,
So git along.'"

THE PRESENTATION

After Dr. Burr's address he was presented to President Ruthven for the Degree of Master of Arts by Professor John G. Winter, head of the Latin Department.

"Colonel Bell Burr," said Professor Winter, "is a graduate of the College of Physicians and Surgeons in the class of 1878, a skilful physician in the treatment of mental and nervous diseases, who has labored long and effectively for the betterment of humankind. His numerous studies in the field of psychiatry and psychology have won him recognition from learned societies, both at home and abroad. Not less important as a contribution to the history of medical education, in which this school took an early and leading part, is his 'Medical History of Michigan,' of which the first volume has recently appeared. In this, as in all his writings, the scientific spirit expresses itself in terms of broad humanity,

with precision and charm of style. Wise in counsel, diligent in research, helpful in social service, he has exemplified in his career of more than fifty years the ideals which animate the study of medicine.

"I present to you Colonel Bell Burr for the honorary degree of Master of Arts."

COMPLIMENTARY DINNER TO

DR. C. B. BURR

The high tide of the publication of the "History of Medicine in Michigan" occurred on Tuesday evening, September 16, at the Hotel Vincent, Benton Harbor, when fifty intimate friends and guests met Dr. Burr at a complimentary dinner tendered him on the completion of the Medical History. The second volume is now ready for distribution. Dr. Burton R. Corbus, Chairman of the Council of the Michigan State Medical Society, acted as chairman of the meeting. Dr. Corbus, in a very fitting speech, referred to Dr. Burr in a way in which he voiced the feeling of everyone present.

"My Friends: There is one ambition common to us all. We would stay as long in this good old world as the competent brain directs the reasonably responsive hand, and since we must grow old, we would grow old gracefully, as gracefully as has this good friend of ours whom we are here tonight to honor. We would grow old happily. We would grow old with the tolerance which should come with the years, and most of all, we would grow old and still retain as much as may be of the mental attitude and mental outlook of youth. We would hold something of the spirit of youth. In this friend of ours the spirit of youth has ever reigned. To be sure, there may be a muscular withering here and there, for time is such an insistent old devil, but youth remains dominantly in the ascendancy.

"It is not necessary, here among his friends, to speak at length of his accomplishments. He is one of our past presidents, one of the past presidents of the American Psychiatric Association, a neurologist and alienist of national distinction. An easy and accomplished writer, he has contributed much valuable material to the literature of his specialty. Those who know him best—this group—know, however, that his greatest accomplishment is his ability to

make and keep friends, a legion of friends scattered all over the world. Can there be any greater accomplishment?

"When, a few years ago, the Michigan State Medical Society felt that it was their duty to record the development of medicine in Michigan, together with the story of the men who made possible this development, we turned with one accord to the one man among us who was peculiarly fitted for the job of editor. He had, it is true, unusual literary ability, but more than this, he was familiar with the history of the medical profession over some of its most productive years. Would he be willing to take over this job, arduous, worrisome, lengthy? It would mean that he must give up his well earned leisure, his travel, his books, for he had retired from the active practice of medicine. His answer was in the affirmative. You see, he was still dominated by the spirit of youth, and I doubt not that with the second volume of the history, now soon to come off the press, and this last job out of the way, youth will make some further unreasonable demand upon him.

"The two volume History of Medicine in Michigan speaks for itself. It is more than a history of medicine. It is the editor telling us the story in his own inimitable way. The old practitioner has brought back to him many an interesting situation, many a forgotten anecdote. Many a tear, I fancy, has come to the eye when an old friend comes to life and travels across the page. To the young man he tells the story of hardships and successful struggles, of accomplishments under adverse conditions unheard of today. It cannot help but stimulate his ambition. Withal it is a good history as a history. It is readable as few histories are readable. And all through, to those in the know, you will find the editor, a youthful Puck here, the very professional alienist there, often the philosopher, but more often scattered through page after page, the loyal understanding friend.

"Dear Colonel Burr, through me the Michigan State Medical Society would express to you its gratitude for this splendid Medical History. We would have you know that we appreciate the many, many hours of toil that you gave it and us, but we appreciate much more the opportunity we have had to associate with you year after year. We love you, and we are happy in

the friendship and love that you have given us.

"In response to the invitation to attend this dinner, this 'legion of friends' have responded with a portfolio full of letters, while telegrams have come in all through the day. I am going to ask the secretary to read some of them that you may know with what regard our friend is held throughout the country.

"In the days before the 'interesting experiment,' in the period sometimes referred to by the drys as 'King Alcohol's Reign,' all was not evil. One may not question that King Alcohol has played, throughout the years, an important part in the cementing of friendships. Dear Dr. Burr, the Michigan State Medical Society wants you to have something tangible to commemorate this occasion, and we have chosen these glasses, commonly used to hold a beverage spiced with a wee bit of alcohol. We would have them signify a still closer cementing of our friendship. We would not presume to dictate your choice of beverage, but as you drink we would have you feel that we are drinking with you a toast to our long friendship."

Dr. F. C. Warnshuis, Secretary of the Society, read a large number of letters and telegrams which were sent congratulating Dr. Burr and expressing the writers' regrets at not being able to be present at the dinner. After the reading of the letters and telegrams of regret, Dr. Corbus again rose and presented Dr. Burr with a crystal punch set on a sterling silver tray of special design.

ADDRESS OF ACCEPTANCE

Dr. Burr, on replying to the address of Dr. Corbus and accepting the gift, was received with applause. It is almost needless to say he was very much affected at the expression of friendship and appreciation of his friends, both present and absent. He said:

"I would like to drink to the good health of my dear old friend, Dr. Stockwell [a lengthy letter of regret was read from Dr. Stockwell] in water, a liquid which he would approve. I'm under the impression that had we wine he would not sanction its use." The toast was drunk in silence and Dr. Burr continued: "My dear friends, Corbus and Warnshuis, and all of you, I feel deeply appreciative of this honor. This

is the most happy moment of my life. No amount of work could have met with greater appreciation than this which has been accorded me. I thank you from the bottom of my heart for coming together, I thank you more than it is possible for me to express.

"Looking back over a career perhaps sufficiently varied, I cannot see that I have been entitled to credit except for recognizing and profiting by opportunity. With one exception, I have always been *placed*. The one venture I initiated as a boy was a complete flop. Everything apart from this has been planned for me." Dr. Burr spoke of going West in opposition to the wishes of his parents, declared he got nothing from the experience so far as career was concerned, but he learned, while with the cowboys, to ride horseback, which was later in life his most enjoyable recreation apart from walking. Continuing, he said:

"Someone will say, 'you elected the study of medicine,' but as to this I am not sure. After returning home from the West, I acquired religion. [Applause.] Believe it or not, it was a serious attack and I began to cast about for something to do. I looked to the ministry, but feeling doubt as to whether I was spiritually minded, thought to study law. God in his infinite mercy, and Martin Montgomery's advice, saved me from this. Then I turned to medicine, hoping to be of service to mankind in that calling. Therefore, I question whether this was of my election. The decision was made under emotional urge.

"I insist that I have been *placed*, located by others; in school, in the onion bed, in weeding the front yard, in peddling apples, undertakings which it goes without saying no boy assumes voluntarily. I was placed as messenger to Clerk N. B. Jones in the remarkable legislature of 1871, and then in the Lansing postoffice with the accomplished journalist and astute politician, Stephen D. Bingham. [See Medical History, Volume 1, Page 123.] With the latter position came extravagance, wastrel ways and failure. Later in life I was for long paying off old scores, but the lesson was important. I've kept out of debt; have never since contracted obligations which I could not meet on the due date; have never desired to accumulate mere money.

"I want to talk to you longer as to how

destiny, or fate, or whatever you please to call it, determines beginnings in one's career; how my preceptors *placed* me, how Dr. Longyear and Dr. Hurd placed me; how the presidential address of Dr. Foster Pratt to the State Medical Society in 1878 influenced me. And in passing, permit me to urge that if you do not read another word in the Medical History, be sure to read that classic in Volume II, Chapter II.

"I must close, as it is time for the annual meeting which we must attend. The essential point is to grasp opportunity as it comes along and then stick it out.

"This is far and away the biggest event in my life. I was placed by Dr. Jackson as Chairman of the History Committee and as a result of this am now most fortunately placed with all these friends whom I love and who have given me this exquisite souvenir."

PRESS REVIEWS

The Michigan State Medical Society, as well as Dr. Burr, is grateful to the Journal of the American Medical Association for the following review of Volume I which appeared in the September 13 number of the Journal.

MEDICAL HISTORY OF MICHIGAN. Volume I. Compiled and Edited by a Committee, C. B. Burr, M.D., Chairman, and Published under the Auspices of the Michigan State Medical Society. Cloth. Pp. 829, with 40 illustrations. Minneapolis: The Bruce Publishing Company, 1930.

The archives of the history of Michigan are replete with episodes and biographies which form authentic sources for a medical history. In 1926, Dr. F. C. Warnshuis, secretary-editor of the state medical society, transmitted President Jackson's appointment of a committee to compile a medical history of Michigan with Dr. C. B. Burr of Flint, chairman. Eleven of the chapters of this book were contributed by Dr. Burr; the remaining chapters were written by Drs. Dempster, Collier, Sawyer and Guy L. Kiefer.

The historical sketch of Michigan's pioneer doctors reveals men of courage who bore the torches as did the preachers and teachers. Though medicine was their calling, they were leaders in all constructive movements. Many are the histories of hardships and privations. By their ingenuity they overcame the handicap imposed by lack of hospitals and nurses and were worthy forerunners of the Michigan men of today.

Dr. Henry Belisle seemed to have been Detroit's first "chirurgien," who came in with the Cadillac party in 1701; next came Jean Baptiste Forestier in 1713; then came Jean Chapoton, who was a surgeon in the French army ordered to Fort Pontchartrain and who died a few days after the surrender of Fort Detroit to the British in 1760.

The first of the American garrison doctors in Michigan was William McCoskry (1796), who had accompanied General Anthony Wayne's legionary army in its slow progress of more than two years

down the Ohio River and across the country to the Maumee River, where, in August, 1794, in the Battle of Fallen Timbers, the Indians were for the first time so badly defeated that they recognized the United States government.

A good depiction of the village doctor of the early days is that of Dr. J. H. Hascall, who, "hunched atop his gray gelding, and equipped with leathern saddlebags stuffed with everything exacted by the more advanced science of the current medical monthlies," would ride over the entire county to reach his patients. Many times he would be compelled to leave his horse and wade through stagnant mires to reach some pioneer cabin in the unbroken wilderness.

Of greater importance in the annals of medicine is Michigan's pioneer in medical research, William Beaumont, a surgeon in the United States Army, stationed at Mackinac Island. In 1822 occurred the event which made Beaumont famous.

Throughout the pages of this history appear anecdotes and brief biographies of hundreds of pioneers and early Michigan physicians drawn from authentic historical sources which, fortunately, are unusually complete. Close-ups are given concerning such men as Hurd, Christian, Longyear and Inglis. A review of the Detroit Gynecological Society is given, and an entire chapter is devoted to Theodore A. McGraw, the great medical teacher, surgeon and soldier who became a national figure because of his pioneer work in abdominal surgery, especially intestinal anastomosis. In 1891 his reputation became international because of his use of the elastic ligature in surgery of the intestines.

If there is any honor in being first, the credit must go to Michigan as being the pioneer state to recognize the importance of professional education in medicine. The University Medical School was founded in 1850, although the University of Michigan had been a reality since the year 1837. The authors describe at length the men who figured in making this among the first of a half dozen leading medical schools of this continent. Linked inseparably with the university was Dr. Victor C. Vaughan, of whom Dr. Hubert Work, President of the American Medical Association in 1920, said, "You all know that Dr. Vaughan is already known as the greatest man in American medicine in Michigan." Other names which emblazon the way for Michigan medical greatness are Novy, Huber, Warthin, Edmunds, Weller and Charles B. de Nancrede.

A remarkable feature of this volume is the completeness with which collaborating human activities are dovetailed into the strictly medical phases of Michigan history. Not only is comprehensive biography interspersed with interesting and elucidating anecdotes, but also a cross-section of the problems which confronted the pioneers and with which the physician of the present day does not have to cope. The part played by prevailing diseases, the havoc wrought by epidemics, the armamentarium of early doctors and their adoption of diagnostic aids and therapy, which forms a document paralleling the experiments of medical men in all sections of our country, are worthy of any man's reading.

This book is much more than a presentation of facts. Such a recital of achievements of early medicine compels the interest of any reader who wishes to know something of the times in which the early men of medicine lived, the conditions they had to meet, and how they met them.

The Michigan State Medical Society as well as Dr. Burr and his publication committee wish to express their appreciation for

the following review of Volume I which appeared in the September, 1930, number of the American Journal of Surgery. The reviewer is Dr. Francis R. Packard, one of the two leading medical historians of this country. The publisher of the American Journal of Surgery is Paul B. Hoeber, Inc., New York.

MEDICAL HISTORY OF MICHIGAN. VOL. I. Compiled and Edited by a Committee, C. B. Burr, M.D., Chairman, and Published under the Auspices of the Michigan State Medical Society, Minneapolis, Bruce Pub. Co., 1930.

The increase of the interest in the medical history of this country, and the desire to render permanent the records of its beginnings before it is too late, are well shown in this large and handsome volume published under the auspices of the Medical Society of the State of Michigan. The work has been thoroughly and excellently carried out by the committee appointed for that purpose and it is evident that the knowledge and ability of its chairman, Dr. C. B. Burr, have had much to do with the success of the project. Although Michigan was a wild and sparsely settled country until well towards the end of the first half of the nineteenth century, the communities which have since become its great cities were largely composed of men of ability and force of character and among them were a number of medical men who not only practiced their profession but also took an active part in public affairs. To these men we owe the foundation of medical schools like that of the University of Medicine and the high standing which the profession attained in Michigan at an early date and has successfully maintained to the present day.

Before the settlement of what is now the State of Michigan there is much of interest in the medical affairs of the pioneer French explorers and the Indians. In Chapters II and III of this book Dr. Burr reviews the available records. Considerable is known of Indian medicine, partly from the pioneer settlers and partly from subsequent scientific investigations. It is curious to find that the Michi-

gan Indians practiced trephining just as similar operations were performed by the aborigines of Peru, in the South Sea Islands, and elsewhere throughout the world. The French explorers were in many instances accompanied by surgeons and Dr. Burr gives interesting details of their experiences. One of them, Liotot, murdered the Sieur Moranget, La Salle's nephew, with an axe, in the course of La Salle's expedition to Louisiana in 1687. Later Liotot was himself murdered in a dispute with another member of the expedition. In the next chapter Dr. Burr tells of some physicians who practiced, chiefly as surgeons, in the Fort at Detroit. These were French until 1760, when the English took over the fort and settlement. When the United States occupied Detroit in 1796 the surgeons at the post were for many years the chief physicians in the town.

A United States army surgeon, William Beaumont, won immortal fame at Mackinac in 1822, when he was acute enough to grasp the opportunity afforded by a gastric fistula following a gun shot wound in the side of a voyageur, and studied the physiology of the gastric digestion. There are many pages devoted to the pioneer physicians, their hardships and experiences. One of the most interesting chapters is that by Dr. J. H. Dempster on Medical Education. The first medical college in Michigan was the University of Michigan Medical School, founded in 1850, and now one of the great medical schools in the United States. Dr. Walter H. Sawyer presents a valuable contribution on Medical Journalism. The subject of Prevailing Diseases and Epidemics is well covered by Dr. C. B. Burr and the volume concludes with an excellent summary of Public Health Work in Michigan by Dr. Guy L. Kiefer.

The book is copiously illustrated with well chosen pictures. It is a pity that so large a volume, 829 pages, should not contain an index.* We suppose that one will be provided in a future volume, but it would have been more convenient had it been placed in this one.

Francis R. Packard.

*Volume II contains a complete index for both volumes.

AN EVALUATION OF MODERN ROENTGEN THERAPY

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Trail-blazers in the field of roentgen therapy were swept with a tremendous wave of enthusiasm; and, as is ever the story in human progress, such exaggerated enthusiasm, built as it was more on the sands of hope than on the solidity of experience, was crushed by an equally sweeping reaction of pessimism. Radium experienced what might be termed a "boom" in the years 1913-15; since this time, the pendulum of opinion has swung back to a more rational position and there now exists a renewed enthusiasm for the roentgen-ray, this time based upon experience together with the development of roentgen tubes capable of functioning continuously at voltages of two hundred thousand and more. Also, the careful studies in the standardizing of tissue dosage within the past few years have contributed much to the stability of this relatively new form of treatment.

Surgery, radium and roentgen-ray should no longer be thought of as rivals in the field of therapy since, so often, they are entirely synergistic in action; frequently, the judicious combination of all three is indispensable to the successful outcome of the case. Surgery often makes possible the use of irradiation, this being aptly termed by Cade "a surgery of access"; conversely, irradiation may render an inoperable condition operable. Of course, the old axiom that "all operable tumors should be operated" has perforce yielded place to the new, namely, that "no tumor should be operated unless statistics for the given type show that surgery can offer definitely better results."

The scope of this paper precludes a discussion of the relative merits of radium and roentgen-ray. Each has its individual advantages and disadvantages as well as those common to both. Obviously, the field of X-ray therapy is widened by its availability, its ease of application and its comparative inexpensiveness. Further, to change from roentgen-ray to radium alone in this country would require several times more than the whole world's available supply of radium.

We cannot hope to cover adequately the almost myriad conditions of humankind that are amenable to roentgen-ray. This very

diversity of application has undoubtedly militated against its achieving in full its merited recognition by the rank and file of medical men. The physician may well be forgiven for looking askance at an agent for which is claimed almost the attributes of a talisman; an agent able to kill the cancer cell; to control the menorrhagia; to convert amenorrhea into normal menses; to shrivel the fibroid, the thymus, the leukemic spleen, the enlarged glands of Hodgkin's; to control the hyperactive thyroid; to work an apparent miracle with the carbuncle, whooping-cough, erysipelas, Vaquez' disease; to cure ringworm, eczema, boils, chronic ulcers, cellulitis, skin diseases, planter warts, actinomycosis; to clear up gonorrheal rheumatism, adnexal disease, condylomata; to relieve hay fever, bronchial asthma, pruritis, arteritis obliterans; to resolve post-operative and chronic interstitial pneumonia, mastoiditis. Such an ambitious list of claims might well make blush the most scandalous patent medicine label-writer; yet, it can be commended without qualm to a niche in every medical memory.

Certain of these conditions will be dealt with in greater detail for the purpose of presenting to the reader some newer applications of this therapy, and of clarifying potential misunderstandings relative to older procedures of interest.

MALIGNANCY

Inasmuch as malignancy constitutes the gravest as well as the most melodramatic problem of the present medical era, it warrants our first and most earnest consideration. Unfortunately, this field offers all too ample scope for the various weapons in our therapeutic armamentarium. However, in spite of the attitudes of pessimism, skepticism and resignation engendered by this ver-

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itable dragon of modern civilization, even now, through the whole-hearted marshalling of the forces, surgery, radium and roentgen-ray, extremely encouraging results can be achieved in the salvaging of the reasonably early cases, and in granting years of relatively comfortable and useful life to the less fortunate; plodding results that would put to shame the pseudo-results of such as the criminally ballyhooed Coffey-Humber cancer "cure."

PRE-OPERATIVE AND POST-OPERATIVE IRRADIATION

In connection with this familiar procedure in malignancy, one might emphasize the fact that X-ray provides the most available, inexpensive and practical effective method for attacking and preventing metastases and extension of the malignant condition. The conscientious surgeon has come to lean more and more heavily upon the therapeutic and prophylactic arm of irradiation. He has learned too well that his most skillful intervention in malignancies of the breast and other locations will avail little unless he at the same time attends most meticulously to all possible and probable areas of metastases and extension whether these be by blood or lymphatic channels.

The most generally approved routine is that in which operation is preceded at least three weeks, preferably five or six weeks, by a course of roentgen therapy. In surgery of the breast for instance, many workers have been convinced that this pre-operative irradiation represents an even more important adjunct than does the post-operative, since it is now well established that the pre-irradiated malignant cell, in the contingency of its dissemination to a more distant region, is infinitely less likely to initiate a secondary, actively malignant focus.

Another very interesting, and possibly vitally important aspect of pre-operative irradiation has been demonstrated by the highly significant experiments with cancer graft by Murphy¹ and his associates, and by Russ and Scott² in London. Small areas of tissue were treated with 50-100% of a roentgen erythema dose; a central area was then inoculated with Jensen's rat sarcoma; in all experiments, the tumor grew into the non-irradiated tissue, leaving the irradiated zones practically uninvolved. This cellular,

irradiation adds immeasurably to the value of roentgen-ray as a prophylactic.

For corroborative clinical statistics, one can do no better than quote those of Pfahler.³ In reviewing his own wide experience in breast cancer together with that of others, Pfahler finds 22% cures from surgery alone (excluding cases without lymph node involvement) and states that when operation is supplemented with irradiation, cures are increased to 46%. In deeply seated malignant involvement, one may reiterate the importance of deep therapy in the true sense of the word, namely, X-rays produced by a voltage of two hundred thousand. With the less penetrating rays obtainable from lower voltages, one cannot hope to get the necessary dosage to the malignant cells without over-exposing the skin portals.

The prognosis from the radiological point of view is always more or less obscured by the fact that malignancies vary so widely in their response to irradiation. At the one end of the scale, is the extremely radio-sensitive tumor cell; the embryonal carcinoma of the testis, the most common tumor of this gland, is particularly vulnerable to irradiation. The enlarged glands of Hodgkin's are also very radiosensitive and often seem to literally melt away under a relatively small dose of radiotherapy. Between this type of response and the highly radio-resistant type are to be found all gradations of responses. An important contribution has recently been made by the pathologist in the way of an histological index of malignancy as a means of determining whether a given tumor should respond to treatment.

Unfortunately, the prognosis of a given case is regrettably grave solely as a result of procrastination on the part of the patient due, in most cases, to fear of operation. It is the privilege and duty of the general practitioner to properly educate and reassure the already highly apprehensive public in this exceedingly vital matter.

THE ENDOCRINES

Thyroid.—The rôle of irradiation in the field of toxic goiter is becoming more firmly established with each passing year. That thyrotoxicosis forms a very complex problem, has long been appreciated. Experience shows that certain cases fail to respond satisfactorily to irradiation but do respond to surgery; on the other hand, cases having a

recurrence following surgery, seem to be permanently controlled by irradiation.

It now seems that the case which is not controlled permanently by irradiation is usually identical with that requiring two or more operations; this type is almost always associated with an incurably irritating environment or an inherited, weak and unstable nervous chassis. Of course, in the case of the large goiter with marked pressure symptoms and disfigurement, the removal of the offending mass is indicated. However, it may be assumed that the vast majority of thyrotoxic cases can be controlled equally well by either irradiation or surgery.

Encouraging results have been obtained in skin diseases by stimulating thyroid function, hypophysis etc., with small doses of X-ray. The same procedure has been employed in selected cases of amenorrhea and ovarian hypofunction; frequently, a normal menstrual function can be initiated or restored; it has also proved helpful in ameliorating the distressing symptoms of the exaggerated climacteric.

Thymus.—Results of irradiation therapy in the thymic syndrome are a source of gratification to all concerned. Frequently, a single brief exposure is all that is needed to transform the alarming picture of the stridorous and cyanotic infant to that of a symptom-free, happy baby. It must be emphasized that not in every instance is there a relation between the size of the thymus roentgenographically and the severity of the clinical symptoms. Not infrequently, even in the absence of demonstrable thymic enlargement, the clinical symptoms are influenced in the same spectacular fashion; hence, in the absence of congenital heart disease, a therapeutic test is not only justifiable but is definitely indicated in such cases. Often, one small dose of X-ray suffices; or a second and sometimes a third treatment at intervals of one week may be necessary.

Hypophysis.—Mention has already been made of the use of stimulatory doses over this gland in skin diseases and in menstrual dysfunction.

MYOMATA AND METROPATHIES

If roentgen-ray were limited to this single field, it would still remain an extremely useful agent. The majority of gynecologists are now enthusiastic over its use in selected

cases of myoma and metropathic bleeding. The suitable cases consist chiefly of fibroids in women of forty and over in whom malignancy has been excluded. Ordinarily, tumors larger than a three months' pregnancy are considered surgical; but, not infrequently, tumors reaching above the umbilicus in patients refusing operation have undergone startling retrogression without untoward results.

In younger women, myomectomy is often advisable; in such cases, intrauterine radium in small dosage has the advantage over X-ray that it can often produce the desired effect on the fibroid condition without causing a permanent amenorrhea. Radium has also the advantage of achieving prompt hemostasis, and is especially indicated in the case with severe anemia. Roentgen-ray is suitable also in the cases with complications such as cardiovascular, lung, kidney, etc.

At one time, considerable concern was felt over the potential dangers of irradiating fibroids in the presence of some degree of adnexal inflammation; as will be shown later in this paper, fears need no longer be entertained on this score since roentgen-ray is now being employed with marked success for pelvic inflammatory disease, thus diminishing to the vanishing point one of the older objections to X-ray therapy in fibroids.

Its numerous advantages in this field are obvious. From the financial standpoint, an important feature lies in the fact that the hospitalization and profound disability incidental to surgical removal are avoided. The patient can continue her ordinary living routine whether it be that of the wage-earner or the home-maker. An hour or less of her time is required each seven to fourteen days; there is no pain or discomfort associated with the procedure and the patient can return to her routine immediately. Usually, there is little or no post-irradiation reaction; the patient may notice a diminished appetite for a day or so after treatment. Ordinarily, five to eight such treatments are required to bring about the desired results. The economic advantage in favor of X-ray therapy in this type of case is tremendous.

Vaquez' Disease.—Roentgen therapy offers the most efficacious and certain means of curing this condition; irradiation is given over the long bones.⁴

Laryngeal Papilloma.—Gruschitzkaja has reported seven cases and is convinced that

irradiation offers a prompt and certain cure that seems permanent.

INFLAMMATORY CONDITIONS

Since the pioneer days of X-ray has come sporadic testimony of its value in the treatment of inflammation. To Heidenhain⁵ and Fried⁶ must go the credit for the focusing of interest on roentgen-ray in this field of therapy. Their authentic statistics covering twenty-four diseases and over fifteen hundred cases show quickly alleviated pain and a shortened course of the disease in over 75 per cent of the cases. This brilliant work has already been widely confirmed and enthusiastically received in American radiological clinics.

The exact mechanism of this action has not as yet been clearly delineated; it is certainly not due to the direct action of X-ray on bacteria, as investigation by Russ⁷ and others has shown. Perhaps, the theory of Pordes meets with most favor. Pordes thinks that the roentgen-ray exerts a direct destructive action on the white blood cells, especially lymphocytes, in the inflammatory infiltrated tissue. Mechanically, this relieves the high intracellular pressure with consequent alleviation of pain; the broken down white cells liberate antibodies and bacteriolytic substances which then act upon the bacteria. Heidenhain has observed that the blood and centrifugate of fluid pus after irradiation exhibit enhanced ability to dissolve bacteria.

Irradiation also results in acceleration of the process of repair, particularly by development of connective tissue; this brings about an early localization of the process, shortens the course and often changes entirely the prognosis in serious cases. In no instance, has any harmful effect been noted when the proper small X-ray dosage has been adhered to.

This highly salutary phase of roentgen therapy embraces practically the whole range of inflammatory conditions, acute, sub-acute and chronic. It has been conspicuously successful with furuncles and carbuncles. The course of the carbuncle is shortened; there is a rapid localization of the process so that the physician has only to make a small incision to evacuate the pus, thus avoiding what is often a painful and mutilating procedure. The physician is especially pleased to secure the benefits of X-ray for the patient with an infection on the face in which

there is the ever present danger of meningeal involvement.

The lymphangitis following paronychia usually disappears within twenty-four hours. In lymphadenitis, the results are excellent; abscess is frequently aborted and, when it has formed, is readily drained and quickly healed by a small paracentesis. Rosenberg⁸ reports 80 cases of which 68 healed without suppuration; no unfavorable results have been observed.

In erysipelas, its beneficial action is unanimously conceded; the local condition undergoes remarkable improvement and the systemic manifestations are influenced most favorably, often within twenty-four hours. The mortality and morbidity are definitely reduced. Striking results have been obtained in post-operative pneumonias. In mastitis, it should be used as early as possible; pain soon disappears and the temperature falls within the first day; one treatment usually suffices.

Adnexal Disease.—Polak⁹ reports excellent results in 34 cases of subacute adnexal inflammatory disease (gonorrheal, puerperal and tuberculous). Pre-menstrual and post-menstrual soreness disappears. In tuberculous salpingitis with peritoneal extension and persistent elevation of temperature, temporary roentgen sterilization eliminates the menstrual temperature reaction, the associated leukopenia and the low sedimentation reaction; the patients seldom experience anything in the way of a reaction. X-ray has the advantage over diathermy that it avoids the hazard of aggravating the process;¹⁰ it often obviates the necessity for severe operative procedures.

At this point, one might wisely digress a moment to answer a probable question in the mind of the reader relative to the possible adverse effect of this widespread use of X-ray here on some succeeding pregnancy. Murphy has reported from a study of 625 cases that pre-conception irradiation has not been followed by a greater frequency of deformities than normally occurs.

Whooping Cough.—Many physicians have already had happy personal experience in coöperation with the radiologist in this trying condition. Roentgen therapy is unquestionably of value and offers perhaps the only means of achieving a rapid and definite change, amounting often to complete recovery within a few days. The most striking result is obtained when X-ray is used within

the first few days of the illness but even if the treatment is delayed, it should still be tried since it helps the vomiting and restlessness and decreases the number of the attacks.¹¹ Usually, the child rests well the first night after irradiation; its effect is first noted in the decreased vomiting, and the spasms of coughing become shorter and less violent within twenty-four hours. One or two treatments are as a rule sufficient, reasonably early in the disease.

SUMMARY

1. The field of roentgen therapy has been reviewed briefly.

2. The necessity for whole-hearted co-operation, especially in malignancy, between

referring physician, surgeon, gynecologist and radiologist has been emphasized.

3. The newer rôle of roentgen therapy in inflammatory conditions has been discussed; the more important indications for such therapy have been enumerated.

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THE IRRITABLE BOWEL: CONFUSION WITH PEPTIC ULCER

REPORT OF A CASE

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It is estimated that 70 per cent of the patients who consult the man doing general medical practice complain of symptoms referable to the gastro-intestinal tract. The better trained physician has arrived at a point where he recognizes certain definite organic diseases such as cholecystitis and cholelithiasis, peptic ulcer, appendicitis, carcinoma in its various sites, and ulcerative colitis. He feels that, if the patient will coöperate, organic disease should be diagnosed in the great majority of cases, when present. Having done so, there will still be a large number of cases in whom he cannot find organic disease that can be labelled with any standard diagnosis. The symptoms will be severe enough to suggest organic disease, but the patient will not respond to therapy that usually relieves or cures organic disease. In addition to this group there will be a large number, a very considerable percentage depending upon the point of view and training of the individual physician, who will be classified as functional abdominal distress, nervousness, hysteria, constipation, fatigue neurosis, colitis, allergy, etc.

As time goes on more and more syndromes are gradually being recognized, removed from the neurosis waste basket, and finding relief with proper management. The rationale of some of this treatment is still very obscure, and although empirical to a certain degree while awaiting further re-

search, it would seem to give much relief to the sufferers. Relief of distress is, after all, part of a physician's function in life.

There is a syndrome characterized by a fairly constant symptomatology labelled with a variety of names: "The Spastic Colon"; "The Irritable Colon"; "Colitis, the spastic type"; and "Irritable Bowel." The physical signs are not uniformly the same; the roentgen findings as yet not agreed upon entirely, but a fairly satisfactory therapeutic management has been attained. The most frequent symptoms are as follows: Distress in the epigastrium¹ is the one most frequently complained of. This distress comes on a variable length of time after food; often it has certain periodicity,⁴ and it is usually accompanied by some degree of nausea, and sometimes vomiting. Gaseous eructations are almost always present. It is frequently relieved by food and may easily be confused with ulcer distress.^{1, 4} The patient is often constipated but may have normal bowel movement. The stools may be normal in appearance, but as a rule

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are abnormal. They are frequently small and hard but more apt to be semi-solid, mushy and accompanied by excessive flatus. The individuals usually maintain their weight in spite of the statement that their appetite is poor. Fatigue is usually present. In addition careful observation will elicit small things that one usually associates with the neurotic. They continue working and often are keen, successful people, although they feel that they would be infinitely more successful if the symptoms were relieved. It is found more frequently in women than in men, although men make up a fair percentage of the cases.

EXAMINATION

Physical examination often reveals some tenderness in the region of the cecum and very frequently there is tenderness in the epigastrium, closely simulating the tenderness of peptic ulcer. As a rule the tenderness is generalized over the abdomen. Roentgenologically there is frequently spasm in the region of the pylorus and the duodenal cap may be deformed. Jordan and Kiefer¹ have adopted certain roentgenologic findings in the colon as diagnostic, when found in conjunction with characteristic symptoms and signs. However, realizing that the normal colon, when examined by means of barium enema, may vary within wide limits, we should be cautious in placing too much weight on comparatively small departures from the supposed normal. Sigmoidoscopic examination carried out in a few cases revealed nothing characteristic.

Most of these people have consulted several physicians. Many of them have had laparotomies for one reason or another, usually the appendix has been removed and they have felt improved for a short time thereafter, only to have a recurrence of distress after a few weeks or months following discharge from the hospital. It would seem reasonable to assume that the change in their mode of living, namely rest in bed and a change in food habits, might be responsible for the temporary improvement. Frequently peptic ulcer management has been given a fair trial but the patient has had no relief.

The following case illustrates many of these features.

A man, aged 50, occupation, druggist, was first seen in November, 1929. He stated that for 15 years he had had stomach trouble of a very constant type. During that time he never had a good appetite, al-

though he maintained his weight at a normal level. He stated that he had a dull, distressing sensation in the upper half of the abdomen, no definite pain, but rather a sense of fullness. The distress usually came on about two hours after food. Being a druggist, he had tried various remedies and found that he was relieved to a large extent after food by sodium bicarbonate, bismuth and belladonna. Nausea was an outstanding symptom and frequently between five and six o'clock in the afternoon, before dinner, he would vomit several times. Following dinner he was relieved to a large extent but would again become very nauseated and vomit late in the evening. He never noted blood in the vomitus. The bowel movements were regular and the stools appeared normal. He had not taken cathartics for several years.

Of interest and importance is the history of other opinions. Nine years ago he consulted a large clinic in the middle west, was told that he had duodenal ulcer and operation was advised. He refused operation on the advice of his own physician. The following year a complete G. I. series was carried out by a leading roentgenologist. He was advised that there was no evidence of ulcer but that the appendix should be removed. This was carried out but without any change in symptoms. Next followed extraction of several abscessed teeth, hemorrhoidectomy and repair of inguinal hernia. No relief. Eight years ago he was seen by a consulting gastroenterologist and was advised that he did not have an ulcer but that the symptoms were due to constipation. Previously he had been a taker of cathartics. A diet, abundant in fruits and vegetables, was outlined. The constipation was cured and from that time onward he has never resorted to cathartics. The symptoms, however, were not relieved.

Examination.—The physical examination revealed nothing of any significance, other than in the abdomen. He was tender about the umbilicus, but without spasm. The descending colon in the left iliac fossa could be felt quite readily, and it was tender.

Roentgen Examination (by Dr. P. M. Hickey).—"The gall bladder is moderately well visualized, rather atypical shape. Gall bladder is possibly adherent to the lower border of the liver. Shadow persists at six hours. Esophagus appears normal. Steerhorn type of stomach. Normal peristalsis. Normal motility. Fluoroscopically the bulb filled out fairly well. Films made with the compressor over the duodenal bulb show definite deformity of the bulb suggestive of duodenal ulcer. No retention. At 24 hours the cecum was movable and not tender. Probable duodenal ulcer."

Gastric Analysis.—Fasting free hydrochloric acid 32, combined 13. At the end of one hour, free hydrochloric acid 35, combined 50. No blood was found.

Treatment.—A provisional diagnosis of duodenal ulcer was made and inasmuch as the patient had never tried peptic ulcer management he was placed on Sippy treatment for peptic ulcer. This he followed conscientiously, after a preliminary rest in bed, but received very little benefit. He was still nauseated a large part of the time but did not vomit. At the end of three months he was advised that persistence in the ulcer regimen was useless.

It was felt that treatment for so-called irritable bowel should be given a trial. Accordingly, on April 1, 1930, he was placed on the following program: Frequent feedings were discontinued and three regular meals planned. Alkaline powders were discontinued. Using a list of 5 and 10 per cent fruits and vegetables, he was encouraged to eat at least three cooked vegetables and two cooked fruits daily. Foods of high carbohydrate content were discouraged for the time being—namely, potatoes,

corn, lima beans and peas, also white bread and candy. Meats were allowed as desired. Salads composed of fruits and vegetables of the 5 and 10 per cent class were encouraged. Water was advised in amounts of 8 to 10 glasses between meals.

Drugs.—The tincture of belladonna was prescribed. Twenty-five drops after each meal for one week. At the end of that time the dose was reduced to five drops T.I.D.

Subsequent Course.—Almost at once after the onset of the above program all symptoms disappeared and he has remained well up to the present time. He has recently spent two months in Europe and while abroad was unable to obtain food as desired at certain towns. He suffered a slight relapse at that time but as soon as he secured his usual food he was as well as before and so remains at the present time.

COMMENT

The above case illustrates many of the features of this syndrome which I have met with, recognized and treated satisfactorily in the last year. There has been quite frequent reference to this syndrome in the medical literature in recent months.^{1, 2, 3, 4} It is a syndrome which is fairly constant in its main features, namely, abdominal distress coming on after food, but without the characteristic pain of ulcer. Nausea is frequently an outstanding symptom. The tenderness is most marked over the colon and the colon can usually be palpated. The patient does not respond to medical ulcer management, although the roentgen findings often suggest duodenal ulcer.⁴ The patient responds to a low carbohydrate diet plus full doses of belladonna, and elimination of the cathartic habit.

Many of them apparently do have abnormalities of the stool, such as mushy soft stools, very hard, small marble-like stools with excessive flatus, excessive mucus, ribbon-like stools, etc. Apparently the barium enema shows no constant abnormality. Gallbladder disease must always be considered, but the usual cholecystitis does not respond so nicely to this type of medical management. They do not respond to bromides and reassurance as does the typical functional gastro-intestinal disturbance in the patient of neurotic make-up.

The rôle that belladonna plays in the relief

of symptoms is apparently very important. Undoubtedly it relieves spasm and in that way restores the normal intestinal gradient. At least if one accepts Alvarez's⁵ conception that nausea is usually a symptom of reverse peristalsis, then the disappearance of nausea following belladonna is quite logical. It has been my observation that the colon remains palpable as before, although the nausea disappears. Belching and "sour stomach," so often complained of, soon disappear.

One explanation that seems very reasonable is that, by feeding fruits and vegetables of 5 and 10 per cent content and reducing the amount of more concentrated carbohydrates, food passes more slowly through the small intestine and that, as a result, digestion has proceeded to the end stage before the large bowel is reached, and in that manner reduces the excessive fermentation that would occur otherwise.

Abbott⁶ believes that the rationale of the fruits and vegetables consists in a regular dosage of a laxative material and waste-forming material, and that subsequent regulation of the dosage will be associated with the proper consistency of the stool.

CONCLUSIONS

1. The syndrome that has been designated irritable bowel may simulate peptic ulcer very closely.
2. The roentgen examination of irritable bowel may appear to be very suggestive of peptic ulcer.
3. Irritable bowel does not respond to ulcer management.
4. A satisfactory management has been described.

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LOCAL ANESTHETIC IDIOSYNCRASIES: TREATMENT*

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Idiosyncrasy to the cocaine group is a serious complication in the administration of local anesthesia. The preliminary work dealing with this subject which I carried on was presented before the American Proctologic Society at Minneapolis in June, 1928. The paper, protocols, and bibliography covering the subject were subsequently published in the *Journal of the American Medical Association* in August, 1928. At that time, my conclusion was that there were two types of toxicity resulting in particular from procaine idiosyncrasy. The first involved irritation of nerve centers, disclosed by convulsions of the clonic type and final paralysis of respiration; the second caused a marked lowering of blood pressure, and is the more common type. My conclusion was that these two types of toxicity were due to an idiosyncrasy rather than to the result of general toxic effect of the drug itself. The first or more serious result was treated successfully by the injection of a solution of soluble barbitol intravenously. The second or less serious type was treated with ephedrine, injected beneath the skin. I have found no reason to change my opinion during the succeeding two years.

Prior and subsequent experience with the human has disclosed that the toxic symptoms evidenced by restlessness, convulsions, and ultimate respiratory paralysis can be prevented by the administration of one of the barbituric acid derivatives. It should be administered per mouth from one-half to one hour prior to the use of procaine. The dosage is variable, but I find an average dose ordinarily given as a hypnotic to be satisfactory. In the second type of toxicity where the patient becomes pale and clammy from lowered blood pressure, an ampoule or so of ephedrine solution ($\frac{3}{4}$ of a grain) is sufficient in the treatment.

There are preparations of barbituric acid derivatives, which offer an approach to the ideal in preparing a patient for local anesthesia. I believe the ideal preparation would be one which could be administered per mouth, was safe to use, produced a twilight slumber, prevented the exhibition of toxic symptoms, and was followed by no undesirable after-effects.

I have been frequently asked to indicate the dosage of soluble barbitol to be used

intravenously for emergency treatment. Since using barbitol as a preventive of idiosyncratic symptoms, I have never seen any; therefore, my experience is confined to experimental study. In dogs, I used approximately five grains, with an almost immediate cessation of symptoms. The animals were unconscious before administration and slept on for a variable number of hours afterwards; one required a second dose after thirty minutes, when restlessness recurred. It has been suggested in the light of recent experimental study that soluble barbitol per se would afford anesthesia sufficient for operative purpose, and was comparable to a side chain salt (iso-amyl-ethyl-barbiturate). With this in mind, I administered intravenously thirty grains of soluble barbitol, the administration period covering approximately ten minutes, no suggestion of sleep or drowsiness ensuing. I followed this with a general anesthetic to complete a simple rectal operation. In another patient, I administered twenty-seven grains of soluble barbitol with the same experience, except that after recovering from nitrous oxide anesthesia the patient became violent and required restraint for about thirty minutes; he then became perfectly normal, remained awake, and expressed the wish to smoke. These two experiences indicate to me that the emergency dosage in adults should run from ten to thirty grains administered intravenously. It also suggests that the basic salt soluble barbitol is not an anesthetic, and may not produce sleep under some circumstances. It is unnecessary to other than mention the fact that the use of barbitol as a preliminary preparation for local anesthesia is rapidly approaching universal extent; the literature discloses that. Its use permits of a stronger procaine solution, with a resulting rapid and complete

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local anesthesia. Until some local anesthetic agent is discovered which is safer to use than procaine, I know of no reason for not using some form of barbital in preparation. Its almost immediate adoption by so many physicians and hospitals, some of the latter making its use mandatory, is strong evidence that its effect is not theoretical. In the event of a death resulting from the

injection of procaine, I am convinced that a surgeon who had neglected the use of some form of barbital as a preventive, might have difficulty in defending himself against a suit for malpractice.

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ENLARGEMENT OF THYMUS IN THE NEWBORN

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One object in presenting this report is to summarize our clinical impressions with regard to thymus enlargement in the newborn, and to reconsider the symptomatology, and the treatment of these infants. The physiology and the function of the thymus is a matter of great interest, but in this field there is only a small amount of positive knowledge. The work of Park and McClure,¹ reported in 1919, showed that the thymus was not essential to life in the dog; extirpation of the thymus produced no detectable alteration in the hair, teeth, contour of the body, muscular development, strength, activity, or intelligence of the experimental animal. They concluded that extirpation does not influence growth or development. It has not been proved that the thymus is necessary to life.² Parker³ reported 50 cases of thymectomy in children with relief in the majority, although there were 17 fatalities. The large number of recoveries is added proof that the gland is not a necessary organ. The most logical theory⁴ holds that it functions as a lymphoid organ in infancy and early life when large numbers of leukocytes, and especially lymphocytes, are needed to combat infection. The large numbers of lymphocytes in the blood at this period of life indicate that these cells are relatively important to the organism. The question of relative loss of thymic and lymphoid tissue which begins at birth and progresses throughout life must be bound up with immunity from or resistance to infections. Its chief function must be exercised either during fetal life or during the very early years of life. There is still a large amount of discussion whether or not an internal secretion is produced, and this question has not been settled with general satisfaction.²

A large and increasing number of reports of newborn babies studied by X-ray for chest shadows is available now. We are specially interested in knowing what type of thymus shadow is present in symptomless, normal newborn infants. There is a series of 119 infants studied by Liss⁵ with the object in view of establishing the normal. There is a further series of 52 reported by DeBuys⁶ with the same object in view. These children presented no clinical signs of thymus or any other abnormality. Of this combined series of 171 infants studied, 76, or 42 per cent, which is nearly one-half of them, showed large mediastinal shadows which were interpreted as large thymus glands. Blackfan² studied intensively a series of 60 infants, all of whom were symptomless, and found that 29, or 50 per cent, had enlarged thymic shadows. He was unable to find any points of differentiation between the X-ray shadow found in "normal" infants and the shadow cast by a thymus causing symptoms. The size of the thymic shadow varies greatly with the phase of respiration in which the picture is taken. Gerstenberger⁸ has obtained pictures of an enormous thymus and of an unenlarged thymus on the same patient within five minutes. The widest shadow is found at the end of expiration, and the smallest and, therefore, the most dependable one, is found at the end of full inspiration. These

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factors make it difficult to interpret X-ray findings. Percussion of the thymic dullness is of no reliable use because of its change with slight rotation or motion of the patient.⁷ Boyd⁹ has reported very completely upon growth of this organ. Her weight curves are very well substantiated by postmortem material. She places the weight of a normal thymus at birth at 13 grams. Blackfan¹⁰ teaches that a weight of over 15 grams is abnormal. There is a general agreement that 20 grams and over at birth constitutes real enlargement.⁹

There is a group of symptoms in connection with which thymus enlargement is always thought of as a possible diagnosis. These symptoms are cyanosis, noisy, difficult breathing or stridor and convulsions. In our experience these symptoms have far more commonly been caused by other factors than by a thymus enlargement. During the past two years 534 infants have been cared for in our nursery service, and 292 more have come under our observation. During the three previous years we were connected with the large nurseries of the New Haven Hospital, the Boston Lying-In Hospital and the Children's Hospital of Boston.

During this period of five years we have been interested in the question of symptomatology of thymic enlargement. Convulsive twitchings or convulsions are very dramatic when present, and in our series we have not seen any child with this symptom as a cause of which we could reasonably name the thymus gland. We have always found some other cause. In a series of 320 admissions to the Children's Hospital¹¹ of infants up to 2 years of age, thirty-five had convulsive seizures. Eighty-three per cent of these were due to tetany or meningitis, 14 per cent were due to congenital conditions, and 3 per cent were of undetermined cause. The congenital conditions were central nervous system lues, congenital heart with thromboses, and one case of cerebral hemorrhage following birth trauma. We have seen one case of tetany at birth in which we thought the diagnosis proved by a low calcium-phosphorus product, absence of signs of bleeding in the spinal fluid, and convulsions. In our nursery service, among 534 admissions we have had eight with convulsions, all due to cerebral injury at birth. We believe that convulsions are very rarely, indeed, caused by thymic pressure.

Cyanosis is the outstanding symptom which we expect to find constantly present in cases which prove to have a real thymic tumor. It has been well proved that the thymus can be large enough to actually compress the trachea, and by encroaching on the lumen of the trachea interfere with normal respiratory exchange enough to give cyanosis.^{2, 12} In our series of 534 infants we had four who showed cyanosis, plus an enlarged thymus shadow at X-ray, plus relief of symptoms by X-ray treatment. We have seen one infant who had marked cyanosis when in a lying position. This cyanosis was markedly relieved when the baby was held in a sitting or erect posture. The variation of this presenting symptom was very unusual and dramatic. An X-ray film was taken of this infant's chest, and it showed an enlarged thymic shadow. Following the picture his cyanosis disappeared and did not return in any posture. Subsequent X-rays failed to show the large thymus. We felt justified in concluding that the small X-ray exposure needed to take the picture was curative. We feel that whenever mediastinal enlargement is present, it should disappear, if it is thymus, with a maximum of four standard treatments. Usually a cure is effected after less treatment than this. However, there are several other conditions which cause cyanosis much more commonly which must be considered in making a diagnosis. *Atelectasis* is especially common in weak or asphyxiated babies. Lung signs of dullness and differences in air entry are extremely difficult to interpret.¹³ Vesicular breathing is almost never heard. In deciding the question of the presence of atelectasis, the only dependable method is the lung X-ray. Atelectasis usually clears up without special treatment in a few days. *Cerebral hemorrhage* when present is quite liable to be accompanied by cyanosis. Increased cerebral pressure is a cause of irregular shallow breathing. Subtentorial hemorrhage causes localized pressure on or near the center of respiration, and is therefore more likely to cause respiratory irregularity than supratentorial hemorrhage. The latter type is the usual cause of constant convulsions, with later a generalized spasticity. The general vigor of these infants is low and they frequently have a subnormal temperature. Lumbar puncture establishes a diagnosis if a bloody spinal fluid is obtained,

and is a very effective part of the treatment of these cases. An excessive collection of *tenacious mucus* in the throat sometimes is the cause of an alarming amount of cyanosis. Pharynx and larynx of these infants are partially occluded by a sticky mucus. We use a small intralaryngeal catheter in cleaning the throat if it seems necessary. A few children even at birth have *enlarged adenoids* which are obstructive to the nasal passages. We have had one such child with complete nasal obstruction, who had no idea of opening his mouth for respiration. He was a weak, dull baby with sluggish reflexes. We felt that his cyanosis would simply get deeper and deeper until complete asphyxia would follow, if a nurse did not hold his mouth open. In this infant an "emergency adenoidectomy" was performed with very good result. *Congenital heart lesions* of varied types give cyanosis, and are usually diagnosed by the presence of murmurs or enlargement.

Stridor, or noisy breathing, is a symptom always caused by a narrowing of the air passages, which usually occurs at the larynx. If thymic pressure actually compresses the trachea, stridor caused in this way should be both inspiratory and expiratory.¹³ It has been suggested that irritation of the fibers of the recurrent laryngeal nerve as they pass through thymic tissue, may cause spasm of the vocal cords,¹⁴ but this suggestion is very hard, if not impossible, to prove, and at present is a theoretical supposition. A thymic tumor may be palpable in the supra-sternal notch, if it is large enough to produce stridor.

We have seen one case in our clinic with a marked stridor, and a very large mediastinal shadow. This shadow and the stridor failed to disappear after two X-ray treatments. The patient then moved out of the city, and we have no further report. The diagnosis is certainly doubtful. We have had numerous cases of *congenital laryngeal stridor* depending on a peculiar shape of the epiglottis, in which the noise is much more marked in inspiration. *Enlarged adenoids* sometimes give respirations of a harsh character. We had one newborn with a *hemangioma* of the vocal cord giving both inspiratory and expiratory stridor.

There are a number of cases reported of status thymico-lympaticus or thymic death in the newborn. Dr. Johnston and myself

have been carefully watching for some such clinical picture for six years and have not seen any death in newborns which could not more logically be ascribed to a common cause such as birth injury, or prematurity, or heart failure. There are case reports enough available, so that it would appear indisputable that so-called "thymic" death is of varied sorts, and produced in varied ways. There is, first, the case of sudden death in which at autopsy an enlarged thymus is found, and also marks of compression on the trachea, showing that there has been firm and long continued pressure upon it. In such a case it seems logical to conclude that it was a thymic death. There is, second, the theoretical case, where it is stated an enlarged thymus presses on other mediastinal organs, large blood vessels, the heart itself, or the nerves, the vagus, the pneumogastric or the recurrent laryngeal. This type of case can not be proved even by the findings of a large thymus, and has not gained general acceptance. There is, third, the sudden death occurring in the presence of not only an enlarged thymus, but an accompanying generalized lymphatic enlargement. This type of case is more properly assigned to lymphatism. It is our belief that there must be an antecedent cause in all such cases, the character of which is very uncertain. We feel that this type of case, known as "sudden thymic death," is a very difficult one to discuss, and a very unsatisfactory one from the diagnostic viewpoint. There is absolutely no question about the fact that a number of children die and at autopsy show a generalized enlargement of lymph nodes and of the thymus but we feel very strongly that in a majority of instances there can be demonstrated something which caused this (septicemia, allergic shock, etc.) and that death should be attributed to this primary causative factor which resulted in the enlargement and not to the enlargement itself.

Whenever we have an infant who presents noisy, difficult, or rapid breathing, we consider it necessary to rule out these other causes, before narrowing down to a diagnosis of thymic enlargement. Then, if there is an enlarged mediastinal shadow, we give two X-ray treatments a week apart, or occasionally only five days apart, and watch results. Our feeling is that thymic enlargement responds very quickly to X-ray therapy, and if there is not an immediate

improvement after even one treatment we begin to doubt the diagnosis. We particularly hesitate to continue X-ray treatment beyond a maximum of four exposures of approximately 25 milliamperes minutes each, because of one case of myocardial damage which followed this type of treatment.

An infant two months of age was brought to the hospital for spells of cyanosis and choking. Before the child was brought to the hospital, an enlarged thymus was diagnosed, which diagnosis was confirmed by X-ray. The child was given three X-ray treatments. Following this the presenting symptoms disappeared, but the child continued to do poorly. Symptomatic treatment was carried out, consisting of careful feeding, parenteral fluid and a series of five transfusions. She died, however, five weeks after entering the hospital. The autopsy showed a small atrophic thymus, a hypertrophied heart, and acute fatty degeneration of the heart. Microscopically there was disintegration and degeneration as breaking up of the muscle fibers. Our pathologist described this as the same sort of change that occurs in X-ray myocarditis in patients with mediastinal tumors who receive massive doses of X-ray treatment.

There is also a report of a case by Dannenberg¹⁵ of a newborn who became first intoxicated and subsequently gradually comatose and died, following two X-ray treatments of the same duration as is usually used.

CONCLUSIONS

1. The thymus gland so far as known is not necessary to life.
2. From 42 per cent to 50 per cent of normal, symptomless newborn babies have an enlarged thymic shadow by X-ray.

3. We have not seen convulsions in the newborn as a cause of which we could reasonably name the thymus gland.

4. Cyanosis may be caused by enlarged thymus, but is more commonly caused by atelectasis, cerebral hemorrhage, mucus in the throat, enlarged adenoids, or congenital heart.

5. Stridor may be caused by the thymus, but is more commonly caused by congenital laryngeal stenosis, or enlarged adenoids, or a local tumor of the larynx.

6. Only cases showing definite clinical symptoms unexplained by other causes than thymus, should be treated by X-ray.

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ELECTRICAL INJURIES*

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The medical profession has been increasingly interested in electrical injuries, since the first fatal accident from a dynamic electric current in 1879. Accidents from lightning are, of course, as old as the history of man.

The electrical industry has developed so rapidly that its magnitude is difficult to comprehend. In less than fifty years it has, in point of invested capital, surpassed all other industries, agriculture alone excepted.

The number of users has tripled during the past ten years, so that today 80,000,000 persons are reached by this industry. And while a vigorous campaign along safety lines and the institution of many safety devices has greatly reduced the percentage of accidents per unit of user population, the

total number of electrical accidents has annually increased.

The factors involved in determining the extent of electrical injuries are many:

1. Voltage.
2. Amperage.
3. Duration of contact.
4. Path of current and importance of tissues involved.

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5. Application—Size of electrodes
Perfection of contacts
Grounding
6. Type of current—D.C. or A.C. (The latter is the more dangerous.)
7. Resistance, and general health of individual.

Some of these are so self-evident that that they will not be discussed.

There are but two methods of procedure to solve the problems of electrical injuries, one by animal experimentation and by the study of human accidents. Most of this work has and will depend on animal experiments.

The fact that animals vary greatly in their sensibility to electricity makes the results of experimental work somewhat less conclusive when applied to mankind. Horses and dogs are killed by relatively small quantities of current, while rats and rabbits are more resistant (Jaffe).

FACTORS THAT DETERMINE THE BIOLOGIC ACTION OF THE ELECTRIC CURRENT

The Voltage.—In general, a voltage under 700 is considered a low voltage current. Currents of from 100 to 250 volts are used for supplying houses and small shops with light or motor power, and from 400 to 600 volts for street cars and city electric trains, but some electric railroads use as much as 11,000 volts. X-ray machines ordinarily use from 10,000 to 200,000 volts. But high tension lines, seen most frequently in long distance transmission, carry as much as 250,000 volts.

The widespread opinion that low tension currents are not dangerous has cost the lives of a great many persons. It is not uncommon to see deaths from the ordinary 120 volt lighting circuit. Currents of 60 to 65 volts have been shown to have been fatal by Jellinek, and he warns that currents of even 25 volts should be considered dangerous.

One case of electric shock and death in a patient wearing a radio head phone, and twelve fatalities while taking high frequency (sinusoidal) treatments, have been reported (Jaffe).

Paradoxical as it may seem, persons rendered unconscious by high voltages are more likely to be resuscitated and to recover, than those unconscious from low voltages. However, burns are much more common in high voltage accidents, and if the grounding is sufficient the heat developed may not only

pith the medullary centers of the respiratory and circulatory systems, but complete charring of the individual may take place. Deaths in high voltage in the absence of extensive burns are usually due to injury of the respiratory center.

Amperage.—The amperage is the true measure of the intensity of the current and is a more accurate index of the current action than is the voltage.

Chapuis states that for normal human beings, alternating currents of 70 to 80 milliamperes, and direct currents of from 200 to 250 milliamperes are dangerous. If the resistance of the skin is lowered to 1,200 ohms by moisture, an alternating current of 120 volts can be fatal, since the amperage in the organism would here amount to 100 milliamperes. In sinusoidal treatments, the saline sponge electrode might reduce the skin resistance to as low as 300 ohms. A current of 30 volts would then be sufficient to place inside the body the dangerous 100 milliamperes.

We have seen 110 volts kill the most perfect specimen of workman working in a small space and bathed in sweat. The not unusual case of bath tub electrocution comes under this category (Charts 1, 2 and 3).

X-ray accidents with their high voltages and very low amperage usually result in moderate shock and have occasionally been fatal.

Unknown biologic facts make certain persons apt to react to low amperage with a definite paralysis of the heart.

It is apparent that only the voltage can be determined definitely after an accident because the resistance of the body at the time of the accident is unknown and cannot be reconstructed.

The *duration* of the contact with the electric current is a most important consideration. Strong muscle contraction may fling the body away and break the contact. Or the contraction may, with or without the assistance of gravity, fix the victim to the conductor until the current is finally broken.

When the skin is burned its resistance is greatly increased and the circuit may be broken because of this. However, if carbonization takes place, the resistance is naturally reduced.

The Path of the Current.—It is of especial importance whether or not the brain, medulla oblongata, or the heart are in the path of the current. Currents going through

the left side of the body have been considered the more dangerous. Kennelly recommends keeping the right hand in the pocket when walking near high voltages. He might well have said to keep both hands in the pockets for there is little, if any, difference between left and right upper extremity contacts, because of the large blood streams converging near the heart; but there is a great difference between hand to hand, or hand to foot, and leg to leg contacts, the latter, of course, being much less dangerous. (Chart 4.)

Type of Current.—The direct current is the less dangerous. Chapuis states that an alternating current is three times as dangerous as a direct one of the same voltage. The number of cycles per second of an alternating current is of great importance. The alternations between 25 and 60, usually seen in industrial currents, are the most dangerous (Jaffe).

As the number of cycles increase the danger becomes less, so that the so-called high frequency or D'Arsonval current of 400,000 to 1,000,000 cycles, up to 3 amperes, has no effect (Diathermy). Human nerves and muscles are insensitive to such high frequencies, and cannot register the rapid alternations.

Faradic currents with their low amperage are never fatal.

The fact that alternating currents are the more dangerous has been widely advertised from time to time.

In the eighties when the first power systems were being built, it is said that there was intense rivalry between the Edison Company, manufacturing direct current equipment, and the Westinghouse Company, who constructed only alternating current apparatus. Two fatal accidents occurred in the Westinghouse works and the Edison Company seized upon this opportunity to make propaganda against the alternating current system, widely recommending it for execution by means of electricity. The political influence of the Edison crowd was so great that although capital punishment had recently been abolished, they actually succeeded in having a bill for electrical execution by alternating current considered in Congress. Shortly thereafter they secretly purchased three alternating current generators of their rivals to be used for future government executions. The Westinghouse

Company sued them and demanded the return of these generators.

In the legal electrocution of criminals, a wet salt pad is placed on the head and another on the right calf. At the end of expiration, an alternating current of 1800 volts is turned on for five seconds. The voltage is dropped to 250 (volts) for thirty seconds, and then raised for three seconds. Thus asphyxia from prolonged tetanus occurs, and probably cardiac fibrillation as well.

Resistance of the Body.—In entering or leaving the body, the electric current meets the high resistance of the skin, which is surpassed only by that of bone.

In a series of experiments carried out by us, it was noted that the subcutaneous fat formed the larger part of the so-called skin resistance. Subcutaneous fat, 2 mm. thick, had a resistance of three times that of skin (dermis and epidermis) of the same thickness.

This is one of the few conditions in which the fat person has a protective advantage.

There is also an individual resistance to electricity, and in this connection we do not use the word "resistance" as an electrical term but rather we mean that quality of the individual which tends to withstand physical punishment. It varies, of course, with age, sex, weight, nationality, and individual temperament, but more particularly with the size and tone of the heart muscle. It even varies in the same individual on different days.

CHANGES PRODUCED IN THE DIFFERENT ORGANS

All tissue changes in the body produced by electricity are caused by heat and there is no specific electrical lesion. Sudden increase in blood pressure from widespread voluntary muscle contraction may produce petechial hemorrhages in the central nervous system or elsewhere.

The Skin.—The most marked changes are produced in the skin. The great resistance of the skin to the electric current results in the typical current markings. The shape is usually round, oblong or linear, with edges slightly elevated around a volcano-like depression. The heat makes the horny substances plastic and on cooling this material is moulded by adjacent pressure. The color is either gray or yellowish. The marking is painless, non-inflammatory, and if the patient survives comes away as an aseptic

necrosis, followed by healthy granulations.

Third degree burns from electric sparks and burns of varying degree from flash and from ignited clothing, are the common forms of skin lesions.

While these changes are frequent they are by no means constant, and some observers report no skin changes whatever in one-third of their fatal cases.

Voluntary Muscles.—Tetanic contractions of the entire musculature takes place. The muscles may be ruptured and bones broken. The first convulsion often seals the fate of the victim, either throwing the body out of the way of further current, or fixing the contacts so firmly that the individual is unable to escape.

Bone.—While bone has the greatest resistance of all the tissues to electricity, a large surface like the skull with its diploë and blood vessels offers less resistance than the thin layer of soft tissues which covers it. Most of the current, therefore, will pass through the skull (Jaffe).

The Blood Vessels.—Since the blood vessels form the best body conductors, it is to be expected that marked structural changes will be found after electrical exposure. Extensive necrosis of the media is the most marked change, and the vessels become so brittle that ligation may be impossible. Thrombosis is often very extensive.

The perfect conductivity of the blood vessels is sufficient explanation of the large per cent of cardiac deaths from direct action of the current.

The Central Nervous System.—Reactions vary from the retention of full consciousness with ability to call for help, to that of instant unconsciousness and death. The electric shock is similar to a blow causing cerebral concussion and if the individual is not rendered lifeless, consciousness may return after a few seconds, with ability to resume voluntary action, walking, or even working. When the victims survive there is no permanent mental change.

The Eye.—Flash burns are common but deep eye injuries are rare. Electric cataract is sometimes seen several weeks after the current passes through the head.

Cases of retinitis have been reported and very rarely optic atrophy.

The Heart.—There is no doubt that most electric fatalities are due to the direct action of the current on the heart. Ventricular fibrillation is easily set up by low voltages

and is always fatal. The fibrillating dog's heart does not recover (Jaffe). It results from the direct action of the current on the muscle fibers or ganglion cells of the heart (Crile). The twitching of the fibers starts at the base and later may even affect the auricles (Jaffe). The heart cannot pump, and both the central nervous system and the myocardium are without blood.

High tension currents do not cause fibrillation. A rapid contraction of the heart may result, but most high tension deaths are due to central respiratory paralysis.

TREATMENT OF ELECTRICAL INJURIES

In addition to that reaction known as electrical shock, which may be anything from a slight shake-up to almost instant death, electric injuries are chiefly of three kinds—burns, paralysis of the heart, and paralysis of the respiratory center. When the voltage is sufficient to cause suspension of respiration, skin burns are usually present.

Burns.—Since 80 per cent of electrical injuries are burns, they constitute one of the more common problems of the industrial surgeon. Besides burns from foreign material, clothing, oil, etc., ignited by an electrical arc, there are two types of true electrical burns.

1. Flash burns from short circuiting or flash, usually about the eyes, face, neck, forearm, or hands.

2. Electrical burns from actual contact of a conductor.

In flash burns, the skin has a more bronzed appearance than in other kinds of burns. It is, however, in the actual contact burns that the difference from the ordinary third degree burn is most evident. The skin, which, when dry and clean, offers a resistance of 50,000 ohms per square centimeter (probably at least 100,000 ohms if through leather shoes), gives the body its chief protection from the electrical current. In the hard and thickened palm of a laborer the skin resistance is often more than doubled. This high resistance of the skin results in its thorough cooking before the deeper tissues are injured. The latter (with the exception of bone and fat) have practically no resistance, and the blood stream is almost a perfect conductor.

Contact burns may vary in size from a pin point to several square feet, and usually, even in wide contacts, have a punched-out area at the center.

In second degree burns there has been an argument, pro and con, as to whether the large blisters should be opened. The chief argument against opening them has been the increased danger of infection. This possible danger applies to any appreciable degree only during the first few hours. Since the patient is made more comfortable by adequate drainage of these blebs, we have made it a rule to open them when they become large. The method of aspirating them through the edge of the cuticle, just outside the bleb, in order to avoid breaking the raised epidermis, has been tried, but this has been found entirely unnecessary. Incision of the bleb, after suitable cleansing of the affected area, is the usual course of procedure. It is not necessary or desirable to early remove the raised layer of epidermis, for at this time it protects a very tender skin and removal often traumatizes the edge of the wound, with the possibility of opening up new spaces for infection.

The treatment of deep burns is directed toward:

1. Treating the burned parts to prevent absorption of toxic proteins.
2. Treating the surface to prevent infection.
3. Keeping up the patient's general resistance by high caloric feeding, crowding fluids to 10,000 c.c. daily, glucose intravenously and blood transfusion.

While a number of substances have been used to treat burned tissue to render insoluble the toxic burned proteins, tannic acid is by far the most satisfactory.

The dressings are kept moist with a freshly prepared 3 per cent tannic acid solution and when the skin changes to a light brown color, usually within 24 hours, the tannic acid is discontinued. Sometimes three or four days, and a 5 per cent solution, may be required to obtain the desired "tanning." For use on the face, near the eyes, we have had tannic acid put up in an ointment with a water soluble base. This has also been very satisfactory in first aid equipment, for the average layman can handle a salve better than a solution for a first aid dressing, and the water soluble feature permits the physician to remove it without difficulty.

As soon as the tannic acid solution is discontinued, open air treatment is carried out under cradles draped with sterile linen.

In the second stage of burns, the secretory stage, which is characterized by the

exudation of serum (or purulent material if infection has taken place), the affected surfaces are painted twice or more daily with a mild solution of one of the aniline dyes, such as acriflavine or mercurochrome.

During the third stage (subsidence) of healing, that is, after the slough has come away, the application of gentian violet stimulates the growth of the skin, perhaps a little better than anything else.

The improvement in the treatment of burns has been very marked during the past few years, and today the treatment can be said to be well standardized. This has resulted in enormous saving in suffering and loss of time, as well as lessened mortality in the severe cases.

Amputation.—Unlike in the case of any other form of trauma, the first examination of the extremities, after an electrical accident, does not reveal reliable information as to the extent of the injury. The reason for this is obvious, for the injury is due to an agent that is shot in, so to speak, in various planes that vary with the conductivity of the tissues and the direction of the current (Chart 5).

In the extensive injuries of the extremities the point and time of amputation have been mooted questions. Experience has shown that as a rule moderate delay is advantageous. If one amputates on the first day, in an arm or leg case, he is likely to find on the second day that he is a few inches too low and perhaps on the third day another inch or two of lifeless tissue has declared itself. The various thermal tests, or even electrical reactions, are of little help. As a rule, by the end of the third day, the permanent line of demarcation has appeared.

If proper care is used in dressing the affected parts, amputation can well be postponed until 72 hours have elapsed, but not much longer for fear of toxicity from absorption of toxic material or infection.

Even after this time, it will sometimes be found that thrombosis, not at first apparent, may require still further loss of the extremity.

Prognosis.—The prognosis in any extensive electrical injury should be very guarded. In no other type of industrial accident does the first appearance of the surface so belie the actual amount of tissue destruction.

The hard slough usually softens and may come out en masse, or it may liquefy, either aseptically or septicly, and come away

slowly. The prognosis as to time should be at least three times that of other burns.

Paralysis of the Heart.—While the heart cases are usually fatal and cause about 90 per cent of electrical deaths, Bourruta thinks that some cases of fibrillation do recover, but never after a longer period than two minutes. The consensus of opinion, however, is that a heart set to fibrillating by an electric current never recovers. Up to a few months ago, no treatment of any value had been found, although almost everything has been tried.

Recently, Hooker, of Baltimore, has found that while "direct ventricular medication is without avail, treatment via the coronaries has a large element of promise. The procedure of choice at the present time is to cannulate the carotid and to inject under pressure 0.5 per cent KCl until the heart comes to rest (less than 50 c.c. being required for a 4 kgm. animal), and to follow with a Ringer's solution, without KCl and with epinephrin added. The solutions are saturated with oxygen and warmed to body temperature. A number of fibrillating hearts have been repeatedly recovered by this technic."

Paralysis of the Respiratory System.—On the other hand the respiratory center may go eight minutes without blood and recovery take place. This is the situation that offers the greatest opportunity for using artificial respiration, which, if started in the first few minutes after the injury, keeps up the life cycle as follows: Artificial respiration oxygenates the blood which keeps the heart muscle pumping, which keeps the respiratory center supplied with blood, which in turn, if not too badly injured, will in time recover and furnish its own nerve stimulus to respiration.

Cardiac fibrillation cases are usually very pale and respiratory cases distinctly cyanotic (*very blue*). It is, however, often difficult to determine which of these emergencies confronts one. Prone pressure artificial oxygenation should be immediately started in either case and kept up for an hour, or until rigor mortis sets in. Even after natural respiration is established, it may be necessary to use mild artificial respiration as an adjunct for a period of time.

A mechanical respirator has recently been introduced which is very satisfactory in cases requiring prolonged artificial respiration (Drinker and Shaw). This ap-

paratus will doubtless soon be installed in all of our larger hospitals.

Electric shock cases should not be set upright because the blood goes to the splanchnic areas and anoxemia of the cardiac and respiratory centers is likely to result.

Heat applied externally and internally (diathermy) may be useful.

Counter shock, such as dropping the patient from a height, or beating his feet, is absolutely worthless and such drastic measures should be discouraged.

RESUSCITATION FROM ELECTRIC SHOCK

While, in all probability, artificial respiration is chiefly, if not solely, applicable to the cases of respiratory failure, it should be tried in all cases of unconsciousness.

Artificial respiration resuscitates the paralyzed respiratory center, and the passive movements of the chest wall tend to produce a slight circulation. This often revives the respiratory and cardiac centers. Artificial respiration does not affect a fibrillating heart.

What may we expect in the average case of a patient unconscious and apparently dead from electric shock? If the condition is one of respiratory failure and artificial respiration is started within the first few minutes, the chances are about three out of four that the patient will be restored to consciousness and ultimate recovery.

Urquhart was able to restore 75 per cent of dogs by artificial respiration after the known lethal dose of electricity had been administered.

MORTALITY IN ELECTRICAL ACCIDENTS

Three observers (Kawamura, Bourruta, and Jaeger) state that 23, 28, and 45 per cent, respectively, of severe electrical injuries are fatal. Probably an average of these, or one out of every three, would be approximately correct. The mortality is certainly no less than this.

Primary failure of the heart is the most common cause of death, probably accounting for 90 per cent of the cases.

POST-MORTEM FINDINGS

How can we tell whether or not an individual has been killed by electricity? This interesting and sometimes difficult question not infrequently confronts us. If circumstantial evidence is not admitted, the answer may be very difficult. Positive post-mortem findings are always due to heat, or sudden increase in blood pressure.

In the absence of skin burns, it is sometimes impossible to find a pathognomonic lesion. When burns are present they are quite typical, but in one-third of the cases no skin burns occur.

Warthin says in a recent communication, "The changes in the central nervous system following electrocution may be gross lacerations and hemorrhages, more frequently, however, they are microscopical only, consisting of myelinization, cloudy swelling and chromatolysis of ganglion cells with loss of Nissl granules."

If the heat is great enough, actual pithing of the medullary centers may take place. The heart muscle is damaged directly by the current, but often there are no microscopic changes. There may be thrombosis in the large vessels, particularly of the extremities.

SUMMARY

1. Electrical injuries are on the increase.
2. The extent of electrical injuries is determined by the heat generated and importance of tissues involved. The changes are non-specific for the action of electric current.
3. Low household voltages are not infrequently fatal.
4. The treatment of burns, now well standardized, should be more generally adopted.
5. Delayed amputation in deep destruction of extremities is desirable.
6. The difficulty of differentiating between cardiac and respiratory cases necessitates prompt prone pressure respiration in all cases of unconsciousness.
7. Prompt administration of KCl solution promises much in the heretofore fatal cardiac fibrillation cases.
8. For artificial respiration we must depend mostly upon the layman, for the very evident reason that he is about a thousand times more likely to be present during the first and vital few minutes.
9. The addition of oxygen or oxygen and carbon dioxide may be tried, but artificial respiration must never be suspended or time lost in order to try the addition of these gases. When given they should always be given with a mask or a tube into the throat, so that at least a 30 per cent oxygen mixture can be obtained.
10. Mechanical devices such as pulmo-

tors and lungmotors have long since been discarded by most of us, for more lives were lost waiting for their arrival than were ever saved by their use, even when they were in working order.

11. In post-mortem examinations, the failure to find electrical tissue changes does not rule out death from electricity.

DATA

RESISTANCE OF TISSUES

Dry Skin.—50,000 ohms per square centimeter (Galinard); 40,000 ohms per square centimeter (Kratter). An area of 100 square centimeters has a resistance then of only 500 ohms; 1,000,000 ohms per square centimeter, hard palm of laborer's hand.

In water skin drops to 1,200 to 1,500 ohms. Resistance of skin changes during passage of the current may decrease in one minute from 260,000 to 380 ohms. Burns may increase the resistance to the extent that the current is broken, but carbonization makes the skin a better conductor.

Mucous membrane	100 ohms (Brandon)
Muscles	1,500 ohms (Jellinek)
Brain	2,000 ohms (Jellinek)
Liver	900 ohms (Jellinek)
Bone	900,000 ohms (Jellinek)

Blood is the best conductor and most of the current passes along the blood vessels (Jellinek).

Total resistance of body is 218 ohms (in electrocuted criminals).

Hand to hand—550 to 1,970 ohms (Bulard).

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SITUATION OF THE CHARITY PATIENT AS REVEALED BY
THE CASE RECORDS*

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The purpose of this investigation was to determine the condition of patients' records in a free clinic, ascertain wherein they could be improved, and if possible point out ways of improvement. These purposes naturally must incorporate any phase of clinic work which might have a bearing on any defects found and whose alteration would assist in the betterment of both patients' care and the record system.

This report might be open to criticism because of the comparatively few records on which it is based. However, the records were chosen at random by the Social Service Division from the files of current cases. The data were abstracted from the charts verbatim and the financial information is just as obtained by the social service workers. We believe the facts presented incorporate a representative cross section, for this is not a study of scientific research where the presence of numerous variables and personal factors must be minimized to their ultimate by great numbers, but a study of human behavior, application and results where each act or omission is a basis for discussion. The decided variation of the comparative figures leaves little opportunity, we believe, for doubting the fairness of the conclusions drawn from them.

Many of the histories examined were most excellent and we are sure that these records are superior to those of many similar clinics. Perhaps some of the faults found are due to haste and overwork, but, if so, the results of such a condition should be corrected and not allowed to continue or constitute an excuse. Our purpose has not been to offer excuses or apologies, but through the facts obtained to bring out constructive criticism and suggestions in the handling of free clinic patients.

In the clinic the social service department for years has had no real trained supervision. Most of the records included in this investigation are of patients who have not had the benefit of a real social service or-

ganization. The possibility of bias has been removed as far as the data are concerned by having others choose the records used in this study. The conclusions may be open to discussion.

With the present day tendency toward socialization of medical practice, our free, or, more accurately speaking, small fee, medical clinics have quite universally become both medical and social agencies. Theoretically both medical and social clinic workers are in harmony striving to better the physical welfare of that stratum of society whose limited finances do not permit the employment of a private physician and pay acceptable private fees. The basic principle of small fee clinics is to provide these people with a good type of diagnostic and therapeutic service at a fee sufficiently small that it conforms to their financial means. The rendering of such service is possible because physicians give their time and skill with no charge to the clinic or public. The trained social worker is usually a paid employee. This difference in the medical and social branches is probably important in explaining some of the divergent views of physicians and social workers as to the eligibility of admittants.

Those physicians who give of their time and skill in assisting clinic patients are entitled to certain consideration and protection. It is imperative that only patients unable to pay the regular or acceptable fees be admitted to such clinics; to do otherwise deprives especially the younger physicians of those patients on whom they depend for a livelihood. Patients coming to publicly supported clinics should realize they are not private patients and they should be available for demonstration and study. The clinic should co-operate in maintaining contact with those patients who manifest interesting or instruc-

*Report rendered to medical staff executive committee and heads of departments of a Detroit clinic. The second part is a recapitulation by Doctor Rosenzweig covering similar phases, and the entire discussion closed by a summarization of remarks obtained from both papers.

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tive problems for the physicians. On the other hand, clinic physicians should manifest equal interest and concern in the clinic patients as in their private practice. It should be each physician's aim to make an accurate diagnosis as expeditiously and inexpensively as possible. Where this is not done, a doctor is guilty not only of professional unfairness to the patient, but he is equally unfair to the clinic, burdening its work and expense unnecessarily. The doctor should be concerned in the patient's social welfare and seek the assistance of the social department in solving that phase of his patient's difficulties. The clinic should constitute a post-graduate training for the physicians, enabling them by broadening their experience to rely less on other physicians or laboratory procedures. If a doctor does not further develop his early training, the time he spends in a clinic is a total loss to him and he will not render increasingly better service to his patients and the community.

As the clinic is organized for dispensing medical services, the social branches should be subservient to that purpose. If doctors are willing to give their services, their interests, as before stated, should be carefully guarded by social investigators. No patients should be allowed clinic services except the truly deserving. It is on this point that a difference frequently arises and we believe each clinic should adopt standards for eligibility of patients which should be submitted to and approved by all the attending physicians. The social worker should assist further in the collection of all social and economic data which add to a solution of the patients' problems of health and social adjustment. It was for the purpose of determining whether these fundamental facts are receiving practical application in this clinic and whether the medical and social groups are functioning in conformity with the purposes we have mentioned as evidenced by the condition of patients' records that we undertook the investigation of 84 patients chosen at random. We have endeavored to determine under two main groupings the methods and results of our physicians and the same qualities of our social division.

FACTS BEARING ON EFFICIENCY OF DOCTORS TOWARD PATIENTS

We found that the 84 patients made a total of 1930 visits to the clinic for both

diagnostic and therapeutic purposes. This makes an average per patient of twenty-four visits. The least number of visits per patient was one and the greatest number for any one patient was 90. These are taken from records covering a maximum period of about 10 months. It appears probable that these figures per patient are in excess of what one would find in private practice for rendering similar service. Each visit was made at a definite cost to both the patient and the clinic, burdening both unnecessarily, which condition must be due to the inefficiency of our physicians or of our organization.

These eighty-four patients paid in fees to the clinic \$1,113.32. This means an average charge per patient of \$13.25, a figure in many instances similar to that paid by the average patient of many private physicians for similar complaints over a similar period of time. For it must be remembered that this average is made up of amounts varying from the smallest charge per patient of 25 cents to the largest charge per patient of \$64.55. In grouping the amounts paid I found that twenty-seven paid amounts less than \$5.00, eighteen paid between \$5.00 and \$10.00, sixteen paid between \$10.00 and \$20.00, thirteen paid between \$20.00 and \$30.00, three paid between \$30.00 and \$40.00, five between \$50.00 and \$60.00 and there were two who paid over \$60.00. About half of the eighty-four paid fees over \$10.00 and almost one-third paid over \$20.00 to the clinic.

The average charge per visit was 58 cents. This figure becomes of decided importance if we believe that the average number of twenty-four visits per patient is too high as it means that these people have paid 58 cents many times unnecessarily. This raises the question whether the many unnecessary visits with the corresponding expense has not made the cost to many individuals closely comparable to what it would have been had he sought the more efficient and time saving services of a private physician. As further evidence of waste and excessive cost, due perhaps to inherent defects in a small fee publicly supported clinic, we find that in only thirty-six of these eighty-four patients was a preliminary diagnosis made by the admitting physician. In 48 no original diagnosis was made and in only twenty-two of these was a diagnosis made later. This means that twenty-six of the eighty-four

patients, or a little better than 30 per cent, never had a diagnosis made in the department to which they belonged. It is quite impossible to prescribe intelligently without a diagnosis, yet 30 per cent of these patients made an average of twenty-four visits to this clinic and no diagnosis or intelligent care was given them. This condition does not conform with the belief that our clinic renders a high grade of medical service. Comparison with attention obtainable for the same cost from many private physicians does not belittle this fact nor assist in the accomplishment of our purpose. It means very obviously that we are not fulfilling our avowed purpose.

Further support of what we interpret as a condition of indifference on the part of the physicians due to their lack of enthusiasm for the clinic idea or their failure to obtain any benefit from it is demonstrated by the referring of patients. This tendency could be a commendable practice but in view of the results we have and will show it apparently arises from lack of interest and a desire to shirk responsibility. These eighty-four patients showed a total of 334 references or were seen on an average in four different departments.

The final and most conclusive proof as to the value of any service is the results obtained. Of these eighty-four patients who came an average of twenty-four times to the clinic we found that at their last visit improvement was noted in only fourteen, or 16.6 per cent, while 70, or 83.4 per cent, showed but slight change or no improvement in those complaints for which they sought the clinic physician's attention. We therefore have the example of claiming to give good medical services at low cost to a deserving class of people while actually in this group we have expended the community funds for overhead and upkeep of the clinic to take care of a group of at least seventy patients at a total cost to the patients of \$927.50 and have given them no relief for their physical complaints. It appears probable that lack of proper and close attention on the part of the physicians, plus an unwillingness to accept responsibility for these patients, is perpetrating a gross injustice and defeating the very purpose of organized medical charity. However, we feel this should be more a condemnation of our clinic system in general than of the individual physician for we believe until we can gain our

doctor's complete confidence by allowing him equal responsibility and authority on the admission of patients and by enabling him to obtain some real assistance toward advancing himself professionally that we cannot alter this condition. These facts appear like a strong argument toward society recognizing that the present system of caring for medical charity is uneconomical, unfair to the deserving charity sick who come to the clinic in confidence and hope and a terrible financial loss where results are considered. Further, it may mean that a community should recognize its full responsibility toward their clinic patients, not imposing on physicians alone to donate their services to clinics, and should realize the futility of expecting that a high quality of medical service can be developed by physicians who have to rely on a private practice for a livelihood. From a standpoint of economy as demonstrated by these figures this is necessary. A further light on the lack of interest displayed by the physicians which entails a large unnecessary loss is found in the results of X-rays ordered. We chose only X-rays for the gall bladder, gastro-intestinal tract, and chest for comparison. Among these 84 patients we found gastro-intestinal X-rays ordered fifteen times, five of which revealed positive findings and ten were negative. There were thirteen Graham-Cole gallbladder X-rays and 4 showed pathology and 8 were normal and ten chest X-rays, only four of which revealed any degree of pathology. The discrepancy between suspected lesions and X-ray confirmation is too great for the factor of error in the method and explainable only by lack of proper examination of the patient by the physician before the X-ray was ordered. The most condemning fact against the physicians is that only 14, or 16.6 per cent, showed any improvement after an average of twenty-four visits to the clinics.

Disregarding causes it is certain that, contrary to belief, these clinic patients are not receiving good services at a small fee but are receiving inferior and costly attention. As proved, 83.4 per cent would be as well off physically and better off financially had they never come to the clinic. Also it must become apparent to the supporters and workers of this clinic that based on results the cost is prohibitive. We base this contention on the patient cost only, for \$1,113.00 was spent to obtain improvement in fourteen pa-

tients, or a cost of about \$80.00 per medically improved patient. Had we the building and personnel cost per patient and could compute the loss for the seventy patients who attended the clinic 1,680 times without obtaining any relief, the loss would become evident. Such results do not warrant continuation without correction. The relief must come through the clinic physicians and awakened public conscience as to its real responsibility toward these worthy but unfortunate sick people.

FACTS BEARING ON EFFICIENCY OF SOCIAL WORKERS TOWARD THE PHYSICIANS AND OUT PATIENTS

In determining the fitness of patients for clinic services it is especially necessary to consider the family income, expenses and dependents. Frequently we found grown children working and able to assist financially. It was evident in all instances that none of the patients considered budgeting their income for payment of necessary medical attention and apparently no such training was being carried out among them. We have considered this phase chiefly from the angle of apparent worth as determined by rent, income and property owned.

In only sixty of the eighty-four patients was the amount of monthly rent noted. The aggregate for these was \$2,150.25 or an average of \$35.00 a month. The largest monthly rental paid was \$110.00 and the smallest stated a very questionable figure of \$4.00. The total monthly income as reported by fifty-eight patients was \$8,603.00, or an average monthly income of \$145.00. The smallest income reported was the questionable amount of \$11.00 and the largest was \$366.00, this latter patient having been seen at least twenty times in four different departments for a cost of \$11.00.

As a further check of the financial status of these patients we determined that eighteen of the eighty-four, or about 21 per cent, owned property. The average value of property owned as acknowledged by the patients was \$7,300.00, the average down payment having been \$2,000.00. There were six, or 23 per cent, of the eighteen who owned their property outright. The average time of ownership was 5.7 years.

It is obvious from these figures that a rather high percentage, 21 per cent, of admissions to the clinic are in circumstances such as might warrant the employment of

private physicians. It is further to be remembered that these figures are not the result of investigation but are as stated by the applicants themselves and knowledge of human nature would lead one to surmise that they are much lower than actual worth. Furthermore, if 20 per cent admit such financial condition it is most probable that there are many others where investigation, if done, would reveal fair financial circumstances. The failure of social workers to exclude this group, if the facts given are sufficient for such action, is a breach of trust to the clinic physician and also places an unjust burden on the already overtaxed source of public funds. Also the costs of these unworthy patients deprives those worthy ones of necessary services which the limited funds do not now permit. However, certain circumstances not ascertained might cast a different light on this situation, such as inability to rent property, other illness in the family, and extent of examinations required, the expense of which would have been excessive while the same individual might have been able to pay for less expensive service.

In reviewing these records we found but very little evidence where the Social Service Division had done any real constructive work. We found no record which contained a social, environmental or any other type of extra-medical report to assist in interpreting the patient's physical difficulties or aid in his rehabilitation with the exception of two reports by the psychologist. These reports might have been kept elsewhere, but, if so, were of no service to the physician. This attention is also a criticism of our doctors, for unless such work is requested by them, which is not often the case, it is not done by the Social Department independently.

CONCLUSIONS

This review of eighty-four clinic patients brings out many interesting facts. It is apparent that the term *free* is a misnomer, when the average cost per patient is \$13.25, and certain patients pay as much as \$65.00 for services. The number of visits per patient of twenty-four appears to imply inefficiency in the rendering of service, as most of these patients were not of the type requiring prolonged care, there being only a few luetics and diabetics. A possible explanation of these unfortunate facts is the indifference and lack of application on the part of the

doctors. This seems very probable because of the failure to make preliminary diagnoses in forty-eight of eighty-four patients and that twenty-six of this number were never diagnosed. These facts also reveal that the doctors' criticism of social workers as to the admission of unworthy patients in this instance gains some support. Certainly, if 20 per cent of patients admit ownership of sufficient property possibly to exclude them according to the doctors' viewpoint and barring other unstated extenuating circumstances, it must be true that accurate investigation would greatly enlarge this group of medical parasites. There evidently is plenty of room for improved coöperation between doctors and social workers, obtaining

real constructive social work for the physician in solving the patient's problems. From the records reviewed, one is forced to the conclusion that the social workers have been acting chiefly as admitting clerks.

Greater activity on the part of the Social Department along the line of real constructive assistance to the physician, were they requested to do so, would undoubtedly give the physician greater confidence and be conducive toward obtaining better medical attention for the now unfortunate clinic patients.

Those conclusions incorporated in the original paper having to do with recommendations for improving the conditions herein found have been omitted from this paper.

THE SITUATION OF THE CHARITY PATIENT

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In April, 1929, Dr. N. E. Clarke presented a report to the Staff Executive Committee and the heads of departments on the care of clinic patients, the records thereof and efficiency of the doctors caring for the patients. This report revealed a surprising state regarding the records and the results obtained in caring for patients. For this reason it was decided to review again these charts in greater detail to determine if possible the reasons for Dr. Clarke's drastic conclusions. However, this report is in no sense an attempt to whitewash any defects present. In the first place it must be stated that the charts studied in this report are *only of fee patients*. There are many patients cared for at the Clinic who pay no fee at all for any service, whether it be medical, laboratory or X-ray; moreover, there is no restriction placed on the doctor in these cases to attempt to curtail expenses, save in hospitalization where the same restrictions, due to lack of funds, are placed on free and fee patients alike. The ratio of small fee patients to free patients is 43 to 18, besides some of the fee patients in certain cases have extra costs as X-ray, etc., allowed free. So it is obvious that the study made by Dr. Clarke is by no means an average cross section at all, as he states in his report. This must be borne in mind throughout this review. The cases reviewed are the same as those studied by Dr. Clarke except that in this report 96 are studied, included in which are the 84

examined by Dr. Clarke. The reason for the difference in number of charts is solely because we did not know exactly which eighty-four were studied by Dr. Clarke in the group selected by the Social Service department for him. Thus we reviewed the whole group of the cases. The small extra number of charts reviewed in all likelihood will not alter in any great degree the questions analyzed in both studies.

In the ninety-six cases examined a total of 2,060 visits was made. This makes an average of twenty-one plus visits per patient. This is commensurate with the average found by Dr. Clarke—twenty-four. As stated in his study the number of visits, however, varied from one to ninety. Dr. Clarke states that this figure is in excess of what one would find in private practice for rendering similar service. This statement we question. In examining these charts we find that many patients had several separate and distinct admissions to the clinic for treatment of diseases not theretofore treated after being closed out; in other words, for

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all intents and purposes and more especially so for making an analysis, we have here more than ninety-six patients treated. We found that separate and distinct *new* admissions varied from one to seven and that we are thus actually dealing here with 150 cases. On this basis the average number of visits per patient becomes twelve plus, which is almost 50 per cent less than the first mentioned average number of visits. Although this is a study of a particular group of cases, it is interesting to note at this point that the average number of visits for all patients in 1928 was nine. Examining further we find that these patients were treated for a large number of diseases at the clinic. This number was 242; however, it is not fair to average these with the number of visits as many were treated for different diseases concurrently. Going over the list of diseases treated brings further light on the reason for the large number of visits in certain cases, and makes more doubtful whether such care could be more expeditious in private practice. A glance at these cases (which number thirty-one) that visited more than twenty-five times will reveal those cases which might be cared for more expeditiously. These cases with large numbers of visits are:

<i>Visits</i>	<i>Diagnosis</i>
26	Furunculosis with general paradenitis
28	Hypertension, lues
28	Chronic dacryo-cystitis; teeth, caries of
29	Luetic aortitis
30	Chronic pulmonary diseases and 4 others, 1 chronic
30	Hay fever, occupational dermatitis
32	Seven admissions, two for chronic disease
32	Diabetes, appendicitis, neurosis
32	Four diseases (heart, teeth, chronic nasal and sinus diseases)
34	Gastro-intestinal diseases (no definite diagnosis)
34	Neurosis, dermatitis
34	Six diseases, two chronic
34	Chronic arthritis; teeth, caries of
35	CVR disease, chronic arthritis, neurosis
38	Hypertension, chronic arthritis
42	Diabetes, hypertension and three others
45	Chronic arthritis, ulcer peptic
45	Hypertension, obesity, chronic arthritis
46	Lues, hypertension, teeth, caries of

- 47 Seven diseases, four chronic
- 51 Hypertension, chronic otitis media
- 51 Six admissions for nine diseases, four chronic.
- 56 Diabetes, C-V-R disease, four others
- 57 Undiagnosed pulmonary disease, teeth, caries of
- 59 Advanced nephritis, teeth, caries of
- 63 Neurosis, injury
- 66 Chronic arthritis, chronic fissures, gall stones
- 83 Lues—active
- 90 Chronic arthritis, gastro-intestinal disease, gynecologic disease, neurosis, teeth, etc.

In going over this list casually it is obvious that diabetics (which have a large number of visits to the Clinic, as meals are counted as clinic visits) could not be more quickly handled. Moreover diabetics are urged to return, rightly so, for the least complaint. All the chronic degenerative diseases will not be handled with any less visits, obviously, for they are going to need medical help and advice the rest of their years. The venereal diseases in all likelihood cannot be cured any faster. Moreover, in such diseases where treatment has lapsed for any reason, we owe it to the patient that he be returned for still further care; in other words, many cases with large number of visits in time will and should have more clinic care. In the remaining cases, however, it is seen that the gastro-intestinal cases, the arthritides and the neurotics have too large a number of visits as compared with private practice. A peculiar situation noted is that rarely, if ever, was a patient discharged from the clinic by the attending physician.

The period of time over which these patients were cared for also accounts in good measure for the number of visits. We find that the period of time varies from one day to thirty months. In other words, the clinic has become the old family physician for these indigent patients, thus accounting for the large number of different diseases treated and the number of new admissions for these diseases. We find that of the ninety-six cases seventeen were cared for over a period of six months to one year, thirty-five were cared for from one year to two years, five were cared for more than two years; that is, of this group reviewed, 59 per cent were definitely chronically ill. In light of all these facts, as new admissions, number of

diseases treated, chronicity of diseases treated, the long periods for which patients required treatment, we do not feel that the average number of visits was excessive nor that they could be treated more expeditiously in private hands, with the exceptions mentioned, which are very small in number but where present are definitely inefficient.

TABLE I

Cases	96
Clinic visits	2,060
Number diseases treated.....	242
New admissions for new diseases.....	150
Treated 6 months to 1 year.....	17
Treated 1 to 2 years.....	35
Treated more than 2 years.....	5

These 96 patients paid to the clinic \$1,280.95. This is \$13.34 per patient, which compares with the figure obtained by Dr. Clarke of \$13.25. However, this amount cannot be accepted as such per se if we attempt to say, as Dr. Clarke does, that private doctors would care for similar diseases for a like sum. The reason for this is that all the fees are lumped together here, while in private practice only a portion of

for chronic diseases over such a long period of time for the mentioned \$7.64 which for the average 21 plus visits per patient would make \$.36 plus per visit. It is worthy to note here that in 1928 the average fee per visit for all patients was \$.41, while the total fee averaged \$3.77. On examining the individual average visit fee we have additional information that individually the fees in these 96 small fee cases were far from excessive. Thus sixty-one paid 25 to 50 cents per visit; eighteen paid 50 to 75 cents; only seven paid 75 cents to \$1.00; six paid \$1 to \$2.00; four paid more than \$2.00 for an average fee per visit; of these four patients one visited only once and paid \$3.50 for an X-ray; another visited two times and paid \$4.00 for an X-ray; the third visited only four times and paid \$10.50 for X-rays; the fourth paid an average of the huge sum of \$4.31 per visit but only \$.25 per medical visit and \$126.00 for dietetic care in the kitchen for 178 days.

On examining these patients who paid considerable in fees we find, as mentioned

TABLE II

Total costs	\$1,280.95
Medical costs	\$733.05
Laboratory costs.....	61.95
X-ray costs.....	259.00
Diet kitchen costs.....	224.25

Average Visit Costs	
Pd. \$.25-.50.....	61
Pd. .50-.75.....	18
Pd. .75-1.00.....	7
Pd. 1.00-2.00.....	6

Pd. more than 2.00.....	4	<div> 1. 3.50—1 visit X-ray cost 3.50 1. 2.50—2 visits 4.00 for X-ray 1. 2.87—4 visits X-ray cost 10.50 1. 4.31 but paid only 8.00 in medical fees, rest to diet kitchen </div>
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this \$13.34 would become a physician's fee. We thus find that the fees for *medical care only* totalled \$733.05. This makes an average for medical care of \$7.64. The fees that are excluded from the above are the X-ray, for meals in the diet kitchen, and for laboratory (in this service charges are only for extra routine tests). The fees for extra routine laboratory work were \$61.95; for X-rays \$259.00. The receipts from patients' meals in the diet kitchen amounted to \$224.25. The average doctor obviously could not derive an income from these fees from the patient. This division in considering fees is absolutely fair, but only in comparing the private and clinic fees; and it is safe to assume that the average doctor would not care

before, that these fees represent care for more than one disease at different admissions. For example, a patient paid \$14.85 over nine months to treat his hypertension and lues; another paid \$21.75, of which \$6.00 was for medical fees, \$12.50 for X-ray, in caring for gastric ulcer over a period of nine months; another paid \$33.96 over twenty-five months to care for nine different diseases, of which four were of a chronic nature; another made forty-six visits at a total fee of \$12.85 to treat his lues; another paid \$49.75, of which only \$14.00 was for medical fees, for care of diabetes and five other diseases. As mentioned, the arthritides, neuroses, and certain chronic gastro-intestinal patients paid considerable sums

of money for which they received little or no benefit.

MEDICAL RECORDS

We now come to a consideration of the medical records themselves. As far as the staff is concerned this is the most important and gives the only index of the type of work that is being done by the physicians on the staff. It is only from the medical records that we should be able to justify our existence, and it is only from the charts that the medical standards of the clinic can be judged. There is no doubt that the records are inferior, as Dr. Clarke has well shown. On the bare fundamentals of a standard medical record there was often a considerable absence. This was pointed out about a year ago by Dr. Williamson of the American College of Surgeons and it was partly because of Dr. Williamson's visit that the Records Committee, of which Dr. Clarke was chairman, was instituted.

Quoting Dr. Clarke, we find that "in 48, no original diagnoses were made and in only two was there a diagnosis made later, while in only thirty-six was a preliminary diagnosis made by the admitting physicians." In this respect this review is in entire accord with Dr. Clarke's in stating that 30 plus per cent were not properly diagnosed, inasmuch as we found in the ninety-six cases studied, that fifteen were never diagnosed at all; eleven were diagnosed but partially, and in these cases usually the most serious of the diseases were undiagnosed; and that 4 were doubtfully diagnosed or the diagnosis was unwarranted from the context of the record;

thirty-two had a good history, physical examination, impression, adequate progress notes, correct amount of laboratory work and consultations, etc., while the rest, sixty-four, were lacking in some or all these fundamentals. Forty were lacking in some respects, while twenty-three were poor in all respects when judged by any standards. One chart was of a dental case only and no comment is made on it or other dental cases except to state that the dental records are meager in the extreme and the notes are the merest skeletons.

TABLE IV

Records—	
Good	32
Fair	40
Poor	23
1 dental record only.....	1
Number of doctors caring for patients.....	372

The frequent referring of patients to other departments in Dr. Clarke's opinion is an index of indifference and lack of enthusiasm on the part of clinic physicians. This, however, is not the accepted opinion of many reputable institutions and physicians. Dr. Clarke states that the eighty-four patients were referred 334 times or seen on an average in four different departments. These two statements are, however, not consistent. They were not seen in four different departments on refer. That is, the doctor is not responsible for such a large number of refers. This situation arises from the fact that patients sign up for various departments when new complaints arise, without consulting the original doctor. This in many instances is helpful to the or-

TABLE III

Completely diagnosed.....	66	} of these diagnosis observed from chart	yes	8
Not diagnosed at all.....	15		no	22
Diagnosed partially.....	11			
Doubtful if diagnosed.....	4			

a total of thirty cases in ninety-six, or 30 plus per cent. However, this situation is not entirely black, as the rest—sixty-six—were diagnosed sooner or later, which is a situation very comparable to what happens in private practice and in the best hospital practice, *e.g.*, we quote from the statistics of the post-mortem examinations at Johns Hopkins that only 40 per cent of patients who die are correctly diagnosed pre mortem.

The medical record as a whole was also studied, and applying the minimum standards set down by the American Medical Association and all Class A institutions, we found that of the ninety-six cases reviewed,

ganization and makes for less delay to the patient and bother to the doctor. Thus a patient may consult four or five different doctors without being referred once. This was actually found to be the case, for in a count of refers by the attending physicians we found only 202. If we consider that the ninety-six patients were admitted for entirely new diseases 150 times, the number of refers not only does not become excessive but is in fact too low. This is borne out by the records themselves, *e.g.*, several lung cases were not expertly handled, no doubt because they were not cared for as well as a lung specialist could; many of the neurotics

also could have been better rationalized by the psychiatrists; some of the cases of hypertensive heart disease never had the benefit of examination in the heart clinic; a case of pituitary obesity might have been benefited more if seen in metabolism. Such instances are numerous. On the other hand, it is true that of those cases referred, there were 34 refers as judged from the context of the chart that were unnecessary. This is a considerable number, 17 per cent, and this represents a considerable loss to the patient, and when it occurred the reasons mentioned by Dr. Clarke were very true. In the series of ninety-six cases twenty-five were not referred to any department.

TABLE V

Number of refers.....	202
Number of cases with no refers.....	25
Number of refers per new admissions.....	146.53
Necessary refers.....	168
Unnecessary refers.....	34

The X-raying of patients was considered in the same light by Dr. Clarke. Here, as in the matter of refers, the same standards of judging their need were considered. The question whether the X-ray reveals pathology or does not show disease is not the crux of the situation. Frequently negative information is more important than positive. On questioning two roentgenologists in Detroit it was found that in their files negative X-rays are more frequent than positive, especially so in the so-called medical diseases. A chest man stated that 700 of the last 1,000 lungs examined by the X-ray showed no pathology. A similar condition was found to be the case here and the situation, we believe, is in no way reprehensible. "In the home office of the Metropolitan Life Insurance Company, 4,800 examinations were made of the chest using fluoroscope. Of these, fifty-nine or 1.2 per cent were rejected on the X-ray evidence. All of these failed to show any signs on physical examination. Out of the fifty-nine, thirty-five were followed during the following year. Of the thirty-five, sixteen had definite evidence of an active pulmonary tuberculosis. Other figures are interesting as follows: 133 were rejected because of physical signs, and of these, only three showed definite evidence of X-ray tuberculosis."*

If this is true in pulmonary roentgenology, it must be more true in gastro-intestinal diseases, where the diagnosis is even more difficult.

Here at the clinic in the ninety-six cases reviewed, ninety-eight X-ray examinations were made. This is a large number and does not compare well with the situation in general private practice. They cost \$259.00 or about \$2.50 apiece, also a considerable cost to the patient, and at a figure at which some X-ray men would be glad to examine patients in numbers. Of the X-rays taken, fifty-nine showed pathology, thirty-nine were normal; on the other hand, judging the necessity for the X-ray again by the context of the medical record, seventy-one out of ninety-eight were justifiable, and in good medical usage, that is, 70 per cent were definitely indicated. Again there is a financial loss to the patient of 30 per cent in the cost of X-rays. Whether these two losses to the patient in the matter of 17 per cent unnecessary refers, and 30 per cent X-rays, can be prevented is a difficult problem. Surely we do not want to put any restrictions on the physicians in the matter of using the X-ray and obtaining consultation freely.

TABLE VI

Number of X-rays.....	98
Cost of X-rays.....	259.00
Positive X-rays.....	59
Negative X-rays.....	39
Number of necessary X-rays.....	71
Doubtfully necessary.....	2
Unnecessary X-rays.....	25

As Dr. Clarke states, "the most conclusive proof as to the value of any service is the results obtained." If we are not helping our patients there certainly is no reason for this institution. We, therefore, examined these ninety-six charts with this factor uppermost. As stated before, these ninety-six patients were treated for 242 different medical entities. These 242 diseases were studied separately to see how many obtained improvement. Of the ninety-six patients treated, twenty-two, or 33 per cent, were improved in all diseases treated; of the remainder, twenty-nine were improved in one or more of these diseases treated; 30 per cent obtained a partial improvement in the diseases treated. Six patients were doubtfully improved, as judged from the charts. The remainder, 39 or 40 per cent, received no improvement in the diseases treated. However, we did not accept this last figure as proof conclusive of poor management. We examined the records of these last, *i.e.*, those getting partial improvement, doubtful improvement and no improvement, to determine in how many cases of these we could or should expect improvement, even

*Quotation from correspondence of chest department with Metropolitan Life Insurance Co.

with the most expert care. It goes without saying that certain diseases will not improve under any medical care. Certain types of hypertension are not amenable to treatment, nephritis gives only temporary relief. Diabetes we usually do not improve greatly, but we do expect to control it. Certain skin diseases are very resistant to treatment. Pulmonary tuberculosis is not likely to be helped by ambulatory care. Neurotics often cannot be helped. It was such cases that we met with in this series. Thus it is that we found that a study of the disease treated itself showed that of this latter group above mentioned we could expect improvement in thirty-two cases, while we could expect no improvement in twenty, and it is doubtful if improvement could be obtained in twenty-one cases, because of the nature of the disease entity. As regards some of these cases where improvement was not obtained, yet normally to be expected, there were occasionally extenuating circumstances; several cases were not returned to the clinic for further care, *i.e.*, social service follow-up was inadequate; some cases did not coöperate or refused treatment, one case asked only for examination as to the possibility of cancer, one case was discharged from the clinic because he became ineligible. But we cannot escape the fact that a large number of cases are not improved by the treatment where the prognosis is good with treatment. This is the crux of the situation and we cannot escape the conclusion that more often than not the medical supervision is inadequate.

TABLE VII

Number of cases improved.....	22
Number of cases partially improved.....	29
Doubtful if improved.....	6
No improvement.....	39
Of these is improvement expected—	
Yes	*32
No	20
Doubtful	21

*Error of one.

SUMMARY AND CONCLUSIONS

From the foregoing statements we have derived the following conclusions:

- 1. That in the majority of cases the average number of visits in these ninety-six cases were not excessive, but that in certain specific diseases there was sluggish care.
- 2. That there were 150 new and separate admissions for 242 diseases among the ninety-six cases.
- 3. That patients were treated from one day to three years, indicating that the clinic

- serves as a family physician to many cases.
- 4. That of the total costs only about one-half or \$733.05 was for medical care, the rest being for laboratory, X-ray and diet kitchen costs or \$7.64 per patient.
- 5. That the majority of the records are lacking the standard minimum requirements of a good medical chart.
- 6. That the use of the X-ray and consultation is not at all excessive, but that there is a considerable number that are unnecessary.
- 7. That a majority of patients are totally or partially improved when this is medically possible, considering the nature of the disease, but that too large a number are unimproved, where improvement is possible.
- 8. Finally, that this review corresponds very closely to Dr. Clarke's *factually*, but that the emphasis for the blameworthy conditions found must be shifted from the institutional staff to the records and supervision of the medical staff.

RECOMMENDATIONS

In an effort to correct the deficiencies elicited in the above review, and to better them, the following suggestions are made.

- 1. That every new patient have a complete history, examination and impression made on his first visit, excepting the specialties, who should make and record a full local examination.
- 2. That the record with patient be reviewed at the next visit by one of the older and more experienced attending men and future treatment outlined. This is especially necessary in the medical department.
- 3. That every active chart be reviewed every month by the head of the department or his assistants to determine whether the treatment might be improved or changed. To aid in this the social service should coöperate.
- 4. Every case that is active for six or more months should be seen by the department head unless obviously unnecessary and proper disposition made or patient discharged.
- 5. That patients be discharged at the order of the attending physician, not by the social service, but through their coöperation.
- 6. That there should be a charts committee whose duty is to review selected charts and bring to attention of the staff derelictions for discussion as to improvement.
- 7. There shall be a monthly tabulation

of the medical results of all patients under *treatment* as to improvement, lack of improvement or improvement not expected.

DISCUSSION OF DR. ROSENZWEIG'S PAPER

DR. NORMAN E. CLARKE: It has been pointed out by Doctor Rosenzweig that this report covers only fee patients and that the average of small fee patients to free patients is forty-three to eighteen. From my own experience with these records, I am unable to account for this ratio as the charts on which my report was based were drawn haphazardly from the files by the Social Service Department and in all instances some fee was paid, there being no attempt made to select small fee and no fee paying charts, so if Doctor Rosenzweig's contention is correct, it is not evident by haphazard selection from the files and it is an established practice in all clinics at the present time to charge fees from all patients, even though the fee be very small, and it is true oftentimes that this fee is not collected.

I agree with Doctor Rosenzweig that many of these patients were treated in various departments. However, in my own report I took into consideration only their initial admission, following this through to its conclusion to determine results from the initial complaints and whether there had been a diagnosis made for the complaints they had at their first visit. It is also very true that most of the visits to other departments were made in an attempt to diagnose or treat their initial complaint. I feel that the question he has raised of the new admissions varying from one to seven is explained on this basis, and even if not, does not alter my conclusions, as I have drawn my opinions only from the initial admission. Therefore, his average of twelve per patient, although conforming with the thought he shows, is not conformative with the method contained in my own paper, as I have considered visits in comparison with correction of initial complaints only.

I disagree with his reasoning as to the number of diseases treated in individual patients as a criterion for these statistics. A review of my own records shows that the treatments in the various departments were efforts to treat the original complaint and I further adhere to my belief that there were many more visits than necessary to accomplish therapeutic results. In my own group of patients, I found by re-analysis that the

complaints in fifty-eight were of an acute nature and amenable to treatment, the conditions being such as acute gastro-intestinal disease, tonsillitis, acute bursitis, dental infections, colds, bronchitis, acute rheumatism, mild neuroses, salpingo-oöphoritis and cervicitis, mild skin diseases, gonorrhea, and so on, while there were only twenty-six whose condition could be classified as chronic, these being chiefly in the group of chronic arthritis, cardio-renal disease, diabetes, lues, and pulmonary tuberculosis.

He has unjustly included the suggestion of diabetic meals and luetic treatments as a cause for the number of visits but in my own group of cases I had 2 diabetics, one who did not receive meals at the clinic and 3 luetics, two of whom received none, or at least very little, anti-luetic treatment at the clinic. This definitely rules out his implication of the number of visits and expense because of these chronic diseases, for in my own list they were a negligible factor.

I differ with his opinion on the matter of fees. His per capita fee closely resembled mine. Practically all the services rendered were medical in nature, there being but one case of diabetes whose diet might be classified as a non-medical expense. I therefore feel that the average charge of \$13.25 per patient was given to purchase the services of physicians alone, as I feel laboratory work which is interpreted by a physician and X-rays taken and interpreted by a physician are medical services. Obviously his item of \$224.25 for diets for the patients is not included in my own report.

In Doctor Rosenzweig's report he has included the visits of patients over two years, where in my own report they are confined to not more than one year.

As to the use of X-rays for negative findings, I feel that Doctor Rosenzweig is quite in accord with their use in private practice. My own contention is that when patients such as seen in these clinics are so close to the borderline of absolute poverty, they should not be submitted to X-rays so frequently for the purpose of obtaining negative results, but X-ray service should be carefully considered only as a check for findings which our clinical acumen has led us to believe is present. Such practice in clinics cannot be based on the ideal practice of insurance companies or private patients.

I again wish to emphasize that my results of improvement or lack of improvement are

based entirely upon the initial complaint of the patient and not on any of the other side complaints developed through their clinical experience as brought out in Doctor Rosenzweig's report. In this situation our opinions are based on entirely different approaches.

As an example of the chronic patient I am quoting the following rather typical history: "This patient owns his own home, valued at \$7,500. It was purchased in 1923, he having paid \$2,000 down and monthly payments of \$45. His income is given as \$34 a month. This patient was seen in August, 1927, for 'weakness about the heart.' There was practically no history or physical findings. The diagnosis was hypertension and obesity. The patient was seen four times in August, once in September, two times each in October and January, and four times in February. The notes were worthless. During this period the patient was seen in the department of surgery, physiotherapy, and medicine, and in April was seen in the department of medicine four times, in May nine times, and a few times in the department of physiotherapy. Complete kidney studies were carried out. In June the patient was seen in the medical department several times and also had an X-ray of the chest and a bronchoscopy, and was seen in the nose and throat department and by the dietitian. The bronchoscopy showed negative findings. There were several visits in November and December, during which time he was seen in the cardiology department and many times in the nose and throat department. When last seen the patient was in the same condition as on admission. The cost was \$29.50."

The following example is what may happen to a person coming to the clinic for an acute trouble: "This patient had a very complete intelligence test. He was seen first on August 10, 1927, because of a cut in the right foot. During this month he was seen three times in the surgery department for wound dressings. In February, 1928, he was seen in the medical department complaining of dysphagia. During this year complete gastro-intestinal and gall-

bladder plates were taken. He was seen thirteen times in March and thirteen times in April, also fifteen times in May. During this period he was seen in the departments of medicine, physiotherapy, nose and throat, psychiatry, orthopedics and by the dietitian. At the last visit a note was made that he felt but slightly improved. It was inferred that most of the trouble was due to a marital situation. He was seen many times in the nose and throat department and the department of dentistry. The cost was \$24.00."

DR. ROSENZWEIG'S FINAL NOTE

1. Dr. Clarke is in error as to selection of charts. The charts which he studied were not a cross-section of the clinic clientele but were of fee patients only. Eighty-four cases from a clinic serving about 1,000 persons monthly obviously cannot warrant generalizations.

2. The clinic in question serves a large number of cases (40 to 50 per cent) who pay for neither medical nor laboratory services.

3. Dependable statistical conclusions can be drawn only by considering all factors (such as variety of the ailments treated) and not by arbitrarily excluding some.

4. Even though poor the clinic clientele are human beings and they should have the best possible check-up on their physical conditions, such as the use of X-ray and laboratory services.

5. The implication of home ownership as, *ipso facto*, making patient ineligible for free clinic service is unfair. Early thrift should not act as a bar against assistance when poverty overtakes a man, especially when monthly payments to acquire ownership are about the same as low rent and at a time when property is salable, if at all, only at a tremendous sacrifice.

6. Criticisms of the Social Service department are of historical interest only, as more than a year ago this department was greatly expanded and completely re-organized.

A CASE OF TULAREMIA

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Although few cases of tularemia have been reported in Michigan it is very possible that the number will increase because of the prevalence of the disease in adjacent and nearby states¹ and because of the large quantity of rabbits that are sent to the Michigan market from states where the disease occurs comparatively frequently. We, therefore, report a single case. A very complete discussion of the disease itself was published by Dr. J. E. Gordon in a recent issue of the Wayne County Medical Society Bulletin.²

Other references are given in the footnotes of this article.^{3, 4}

CASE REPORT

W. M., age 58, fish merchant. On the thirteenth of December the patient ran a fish fin in the lateral side of his left thumb at the distal phalanx. About six days later the thumb became denuded the entire length of the nail, on the side where the fin had pierced. It was hyperemic, tender and painful and there was a thin purulent discharge. On December 18 he appeared for treatment. The ulcer on the thumb was noted. In addition there was a swollen left axillary gland. The patient complained of fatigue and dizziness. His temperature was found to be 103, blood pressure 100 systolic and 60 diastolic. The wound on the thumb was treated with Dakin's solution for several days with no improvement. Further questioning then brought out the fact that three days after the piercing of the finger with a fish fin the patient was employed in cleaning a number of rabbits which he had received from one of the southern states. The question of Tularemia then arose and a specimen of blood was sent to the laboratory for examination on December 23.

LABORATORY FINDINGS

Bacillus Tularemia positive, negative for Bacillus Typhosus and Bacillus Abortus. The Kahn reaction was negative. The blood count showed red cells 4,500,000, hemoglobin 60 per cent, white cells 13,100,

polymorphonuclear cells, 75, small mononuclear cells, 23, large mononuclear cells, 2. The urine was normal.

OUTCOME

The symptoms were little relieved by symptomatic treatment. The axillary gland was finally lanced after suppuration had taken place during the second week. Drainage from the gland continued for six weeks. The patient suffered fatigue and dizziness for a period of three months. He then discontinued treatment and was not seen until August 26, 1930, in response to a request by the writer for an additional sample of blood to be tested for tularemia. He claimed that he had never fully recuperated from the symptoms of the disease. He had a temperature of 99, pulse 98, blood pressure 130 systolic and 80 diastolic. As he was suffering a mild attack of hay fever the temperature may have been due to that. The serum reaction was positive for *Bacillus Tularensis*.

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PARENTAL ATTITUDES TOWARD DISCIPLINE

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Attitudes toward the disciplining of children are often established as a result of the emotional relationships and problems of the parents themselves. This is especially true in the present family setting as a result of the increased emotional strain and altered standards of living, produced by the shifting tendencies of modern social and economic life. The question of just what a parent's feelings toward discipline are, changes over a period of years paralleling the alteration of the family structure and beliefs as to the best means of bringing up children, at the time. It is also variable in type of expression, depending on the background of the family dealt with. That is why Johnnie may be a disobedient, unruly child in one family, while in another he may represent a model child while engaged in the same activities. Parents of one type of training and education vary from those of another group. The rigid family reactions laid down by "Puritanical" families are different from the

"Bohemian" type of freedom accepted by such groups.

It is quite conceivable that a child may obey parental suggestions and orders to a degree that may be regarded as abnormal. By following every suggestion of his parents he may become a docile, fearful child, who cannot face reality and its responsibilities later. By obedience is meant the response of a child to a request or sugges-

*For professional note see page 426, June number of the *Journal M. S. M. S.*

tion of the parents, so that his health, well-being and habit training can be established with a maximum of efficiency. Obedience is a means by which the "older, more experienced adult supervises and guides the offspring and safeguards him against the menaces and dangers of impulsive acts." Any offer to make the child conform and obey should be a constructive one, because in this way the child learns the standards and realities of life. Safeguard against body harm, the security and comfort of the group, and prevention of the violation of socially acceptable customs are the fundamental bases of the use of discipline. Acceptable and serviceable habits should be the goal in instituting satisfactory disciplinary measures. Many problems of a disciplinary nature developing at puberty when deep impulses are awakened have to deal with difficulties which found origin much earlier. A child may not learn fundamental habits of behavior by expecting him to accomplish tasks unsuited to his age. Confusion should be avoided by not teaching the child too many things at the same time. A pattern of reacting, or habit, may result by a few repetitions of an act which the child learns to find pleasure in doing.

A child in his earliest years of life is dependent upon the parents for security and protection. As he grows older, he emancipates himself and utilizes the mechanism of a natural inherent curiosity to experiment with the environment. As a result he may get into difficulties. Therefore, it is very important that a parent realize that curiosity and suggestibility in children are natural phenomena. To punish a child who makes an effort to satisfy his curiosity is an indication that the parent does not understand and recognize the child as a strictly developing entity within himself. It is important to realize that the child resembles a dynamo with a great charge of energy. Energy should be released in a socially acceptable manner. This can be accomplished by giving him an opportunity in the home for the taking on of responsibility, as, for example, by having a work bench at which he can construct things. Often, contact with other children his own age can bring this about. Curiosity should be satisfied as soon as the child asks questions. There are many children with conflicts over sex, who direct the energy produced by worry over faulty habits into a form of disobedience at home and in

school in order to relieve the tension. The child should have an opportunity for having questions answered. He should have enough personal possessions with which to experiment. It is important in this way to produce in the child a sense of personal property value and rights by giving him exclusive ownership of articles. He should have a special place in which to keep his belongings. At the same time, he should be told that others have similar privileges. It is unjustifiable to punish a child who takes things which do not belong to him, and who, at the same time, does not recognize the importance of personal property rights. We must consider the child's motive and temptations which have incited the deed. It is necessary to determine why the child reacted in such a manner. The child should see the relation of the offense to the punishment received, which in turn should not be excessive. Giving the child responsibility early, such as by placing him on an allowance, teaches him the value of money and accustoms him to reality. Again, punishing a child who takes money and who at the same time has not been trained in the manner described is unwarranted. The child feels that his parent does not understand him and may, therefore, develop retaliative measures.

The decreasing use of corporal punishment can clearly be discerned. By corporal punishment we mean the infliction of pain in order to punish the individual for some act committed. It is of interest to determine the reaction of children during and after the course of physical punishment, as there are a number of parents who still utilize this means at the present time. To hear the vindictive, and even retaliative, destructive desires of the child toward the offending parent would surprise the latter. Children require discipline and supervision in order to protect them from danger. Often a statement as to the menaces to be encountered is sufficient. If the child must be punished, the punishment should be at the time of the experience and should not be postponed. There are some children whose mothers make the threat, "Wait until your father gets home, he will fix you." Not infrequently the fathers are docile, meek individuals; nevertheless, by constant reiteration of the statement, the father becomes a fearful personal threat to the children, thus preventing a satisfactory relationship with

the father. The child should not be punished when the parent is in an angry mood, because at these times the parent utilizes the punishment as the relief for his own tension and dissatisfaction. Deprivation of something that a child enjoys, with a frank statement as to why he is being deprived, has often been a satisfactory means of handling disciplinary situations. The child may not recognize what the parent has in mind, as perhaps the child is too absorbed in play. Therefore it is important to make sure that the child understands the request of the parent. By understanding a child and by giving him an opportunity for self expression, he is more willing to accept the advice of his parents.

Another common family situation producing disobedience among children is the jealousy of one child for another brother or sister. As a result, the child feels that he is not given due recognition in the home, and may express his disappointment and resentment by being a "bad boy." Paul G., nine years old, developed a pattern of disobedience in order to gain attention and to express resentment toward his parents on account of jealousy aroused by a favored brother in the family. This boy, whose psychological tests rate him highly, has become a school and home problem because of truancy, because of stealing from his mother, as well as by disobeying her every suggestion. By studying the family situation, it was noted that there was a younger brother who was decidedly the favorite of the mother. In addition, the younger brother was further advanced in school and was taller and stronger physically. Paul had been retarded in school and in development because of one year's illness. The father was an active athlete in his college days, and was admired by the child very much. However, the father was too busy with his work and had no time to give Paul, so that the child was deprived of these contacts. Because of jealousy toward his brother, and finally because of his resentment toward his mother, he attempted to block every suggestion the latter made. Apparently, his stealing from her represented a retaliative measure. He developed food fads and refused the diet his mother prepared for him. After giving the child more attention and recognition, as well as rewarding him for his good deeds, Paul was able to make a satisfactory adjustment. He was

placed in another school so that the constant annoyance of having his younger brother further advanced in school work has been minimized.

Some parents merely scold and nag children because of misdeeds, but they will not praise them for things done well. There is nothing that a child likes more than praise and recognition. Some cases of bed-wetting clear up simply by the parent's praise of the child for his dry nights and the failure to call attention to the wet ones.

Another important problem which produces disobedience in the child, and which should be understood by the parent, is the situation in what is termed "identification" of a child with his parents. By that is meant that the parent recognizes that the child "takes after," and wants to be like one of the parents especially. The child may become united completely with this parent on an emotional level. Alice, eight years old, was an extremely bright and normal child in every respect. The family history was very unfortunate, due to the fact that the father was an alcoholic and the mother a sex problem. The child was adopted by a relative, a very understanding, sympathetic woman. Alice came to live with her and became so attached that in her play life and phantasies, she pretended that she was this relative. This was carried so far as to enjoy wearing her dresses and jewelry. Her husband, as soon as he found out that the child was taking jewelry, assumed that it was stealing and imagined that it was the result of the child's heredity. He considered her a potential delinquent. One can see how erroneous this is when the facts have been brought to light.

There are two distinct types of parents who offer the most difficulty. The first type is the self-sacrificing parent who gives up everything for the child. The mother is over-solicitous and over-protective. Usually, the offspring becomes a selfish, domineering child, "spoiled," and who expects everything from people about him. Sometimes the opposite occurs, in which the child becomes so protected that it remains infantilized. Another type of problem is the one in which the mother protects the child at home so much that he never can face school difficulties. Perhaps he was the only child that the mother could have and was, therefore, an added hazard. If there is a question of having no other children, or of

the mother having the child near the menopause, this child becomes an added risk and is, as a rule, safeguarded more completely. The mother watches over the child more effectually. All of her affection is focused on this solitary child.

Children who have been ill with convulsions at an early age, or in whom there may have been danger of death because of serious illness, sometimes become conditioned in their attitude toward body health as a result of the parent's morbid anxiety regarding their offspring's well-being. Sometimes the child who is overly safeguarded in this way may be dressed in "sissy" clothes by the mother. Such a child usually is teased by the boys in school and, in order to show that he is not a coward, may be incited to perform delinquent acts. At times in gang life, a child may show his virility and express the power which had been blocked by his overly-protective mother.

The other type of parent who offers a good deal of difficulty is the one who dominates and "brow-beats." Their children sometimes are fearful, repressed, and become dependent on others later. In such cases, it may be noted that the parents had been repressed by their own parents in childhood and are repeating the pattern of punishment, which they have accepted as being justified because it had protected them from difficulty. One well-meaning but misguided young mother showed a strap to the child, threatening the child with punishment at every turn. The child became so fearful that he trembled in his mother's presence. He carried this fear reaction over to his school life. He was afraid of the teacher because she resembled the mother in many ways. The child was a failure in school, even doing worse work than a mentally retarded child who can learn a great deal by repetition and force of habit. A vicious circle was set up in which the child received more punishment at home because of his

school failures. The mother had been punished in this way by her own father so she thought that such a means was justifiable to prevent the child from entering into difficulties.

Another type of emotional problem in the family situation exists in the so-called "unwanted or rejected" child group. By that is meant a child who is unwanted, either consciously or unconsciously, by the parents and who acts as an obstacle and may interfere with the career of one of the parents. As a result of this deep underlying rejection of the child by the parent, the child's responses cannot be viewed objectively. In this "charged" home atmosphere, the child may become restless and over-active and may develop habits of "nervousness." This type of child may get into difficulties simply because of his over-activity.

In conclusion, punishment should be at the time of the breaking of the rule, and should be given in an unemotional way, depriving the child of something he appreciates. A frank discussion with the child, pointing out to him why he is being punished, is of value. Punishment should be constructive and its significance should be understood by the child. Disagreement in front of the child as to type of punishment to be meted out is deleterious to his morale. Often one parent will "spoil" the child and the other parent concentrates on being too strict, to compensate. The child should learn firmness in the parent, so that respect for authority will be facilitated. A parent who rejects his child loses objectivity in handling its problems. Parents utilize the mechanism of punishment as a means of relieving themselves of their own emotional states of dissatisfaction, anger, unhappiness, etc. They project their failure of adjustment upon the child whom they punish. Surely patience and understanding can be virtues, where austerity and failure of comprehension of a child's needs are the vices.

DIABETES MELLITUS, HYPOGLYCEMIA, AND CEREBRO-SPINAL SYPHILIS

REPORT OF CASE

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The literature abounds with statements regarding the infrequent occurrence of parasymphilitic manifestations in cases of true diabetes mellitus. Joslin¹ states that since 1919 he has been able to trace only two cases of tabes, one of aortic aneurysm, and one of aortic insufficiency, which were undoubtedly luetic in origin. Furthermore, since only six patients from his series of 6,000 cases of diabetes have been sent to an asylum for insanity, it would seem that if lues were of etiological import, the diabetic seems to possess a remarkable immunity to its manifestations. In 5,086 cases, Joslin found 1.9 per cent with positive Wassermann reactions. John² found 2.7 per cent with positive Wassermanns in his series of 2,000 cases. In our own series of 1,073 cases (unpublished), we found 3 per cent serologically positive, though not all proven syphilitic by other means. Lemann,³ reporting on the occurrence of syphilis and diabetes in a large negro service, found a general increase in the occurrence of syphilis over that of the general population, with a decrease in the incidence of diabetes. Rosenblom⁴ found sixteen patients with lues in a group of 139 diabetics. Many cases are reported having glycosuria with a central nervous system involvement which probably are not true diabetes mellitus. Graham⁵ states that he has seen but two cases of syphilis and diabetes, and that the two diseases coincidently in the same patient are of rare occurrence. Warthin⁶ did not state that syphilis was the cause of diabetes, but only that it was a common cause of interstitial pancreatitis, and that if the latter were the cause of diabetes, syphilis must play a large rôle in its causation.

Our interest in this subject has been stimulated by the following case, which fulfilled all the requirements to prove that it was true diabetes mellitus, and was so accepted and treated while in the hospital. This patient had high blood sugar readings, excessive amounts of glucose in the urine, acetone breath, and diacetic acid in the urine. He had coma, Kussmaul respiration, and soft eyeballs. He responded to diet and insulin therapy, and only later, when some curious symptoms arose, was the suspicion aroused that he was not the usual type of diabetic patient. The case presents some unusual features about which to speculate.

REPORT OF CASE

History.—Mr. L. P., a white male aged 46, was

admitted to the surgical service of the Grace Hospital on September 17, 1929. While working upon a freight engine, he presumably slipped, and fell to the ground, a distance of about ten feet, and fractured the left os calcis. No history of unconsciousness could be elicited, nor anything which would make one suspect epilepsy. His foot was given the necessary surgical attention, and a history was taken, which indicated that he had had diabetes for some years previously. The urine specimen taken upon admission was negative for sugar. His parents were both alive and well. There was no history of familial neuropathic disease. The patient had been married for twenty-six years, and had four living, healthy children. His wife had had no miscarriages. There were several diseases of childhood, none severe, or of unusual importance. He stated that he had never had any serious illnesses, and no venereal disease. For the past three years, since finding sugar in the urine, he had had occasional frequency and polyuria. There had been no previous accidents or operations. In 1926 he was admitted to a hospital for treatment of his diabetes, and since that time had been living on a self-regulated diet, and was taking insulin in doses of 20 units two or three times each day. He had had glycosuria for the past several months.

The physical examination was essentially negative, with the exception of the following points: he was greatly emaciated; the eyes showed some clouding of both lenses; the pupils reacted somewhat sluggishly to light; the reflexes were present, but were slightly sluggish. The blood pressure was 140 systolic, 80 diastolic. X-ray examination showed a fracture of the left os calcis. The urine was negative for sugar upon admission. The blood sugar the following morning before breakfast was 317 mg. per 100 c.c. The patient told the surgeon that he understood his diabetes well, and was therefore allowed to choose his own diet and take his own insulin, which he did until complications arose.

Course.—For several days there was improvement, but no blood sugars were taken and the urine was not examined. On September 24 he began to complain of abdominal pain, which was so severe that he was given codeine by the intern. Later in the day the patient lapsed into a profound coma, and thereupon began our connection with the case. The blood sugar at this time was 571 mg. per 100 c.c., the N. P. N. was 60 mg. and the CO₂ was 20 volumes per cent.

With the usual methods of treatment and insulin, the patient was out of his coma on the following day. He proved very hard to manage, however, as he insisted upon not eating the foods prescribed because some of them contained starch, which he had been taught was harmful. Another difficulty encountered was a very high morning blood-sugar,

DIABETIC RECORD											
Date 1929	Urine		Blood Chemistry				Diet			Day's Insulin	
	Diabetic	Sugar	Sugar	CO ₂	NPN	Time	C	P	F		
9/17	—	—									
9/18			317			acb					
9/25	pos	pos	571	20	60	acb	100	24	24	90	
9/26	—	39.0					60	60	80	45	
9/27	—	9.0	241	42	45	acb	refused			20	
9/28	pos	pos					refused			35	
9/29	—	5.4					80	70	100	30	
9/30	—	7.2	256				80	70	100	30	
10/1	—	10.5					80	70	100	35	
10/2	—	9.9					80	70	100	40	
10/3	pos	pos					80	70	100	40	
10/4	—	4.5	370			acb	90	70	100	55	
10/5	pos	12.0					90	70	100	45	
10/6	pos	11.6	400			acb	100	70	100	45	
10/7	pos	14.6	44			3 p.m.	100	70	100	45	
10/8	pos	—	416			acb	100	70	100	40	
10/9	—	20.1	285			acb	100	70	100	45	
10/10	—	—	62			3 p.m.	100	70	100	50	
10/11	—	—	41			3 p.m.	100	70	100	45	
10/12	—	—					100	70	100	45	
10/14	—	—	70			acb	100	70	100	20	
10/19	—	—	285			2 p.m.	100	70	100	20	
10/19	—	pos	350			4 p.m.					
10/20	—	39.0	285			acb	100	70	100	30	
10/21	—	18.0	208 180			acb 3 p.m.	120	70	100	30	
10/22	—	17.5	148 266			acb 3 p.m.	120	70	100	30	
10/23	—	—					120	70	100	30	
10/24	—	—	42			acb	120	*	*	10	
	—	—	206	42	27	1:30					
	—	pos	392			2:30				10	
	—	pos	333			4:30					
	—	pos				11:00	after death				

Chart 1. Tabulation of daily observations.

and a very low reading in the afternoon. He was not constantly sugar-free until October 8, and the four days prior to this were marked by severe hypoglycemic reactions, one of which was severe enough to require adrenalin, which was followed by ten grams of glucose intravenously. At this time he was unconscious for over an hour, but had no convulsions. He responded quickly to the glucose injection. No blood sugar was taken during or immediately preceding this reaction, but the urine was sugar-free.

The insulin dosage was juggled about from day to day until October 12, the date of discharge, when he went home, sugar-free, and reaction-free for three days. The diet was C 100, P 70, F 100, and the insulin was 10 units at midnight, 20 units before breakfast, and 5 units before dinner.

The following day a sharp reaction occurred about 2 P. M. which we attributed to the increasing physical exercise. It was accompanied by a convulsion, which was epileptiform in character, and lasted about one-half hour. The patient had had his lunch. He recovered upon having some glucose by mouth, and the insulin dosage was reduced to 10 units before breakfast, 5 units before dinner, and 10 units at midnight. His urine had been

sugar-free for the twenty-four hours preceding.

This occurrence was repeated on the following afternoon at 4:30 P. M. On this morning he had been to the clinic, where a fasting blood sugar was taken which was 70 mg. per 100 c.c. He had been instructed to reduce the insulin to 10 units at midnight, and 10 units before breakfast. No afternoon specimen could be obtained on this day.

For several days he was quite well. Then, on October 18, at 1 P. M., after having eaten half his dinner, he suddenly had a severe convulsive seizure at the table, and lost consciousness. He was still unconscious an hour later, and was having clonic convulsions with cyanosis and frothing at the mouth. These occurred at intervals of ten to fifteen minutes, and were always accompanied by a turning movement of the head to the right. There was profuse perspiration. He had been given syrup in hot coffee, which was followed by adrenalin, and then ten grams of glucose intravenously. Two more seizures occurred and a blood sugar taken at this time was found to be 256 mg. per 100 c.c. of blood. The patient showed no signs of improvement and was sent to the hospital, where he recovered consciousness at 3:45 P. M. On admission the blood sugar was 350 mg. per 100 c.c. The

next day he was up and about the ward, suffering only from a severe headache. No incontinence occurred with these seizures.

For the next few days, blood sugars were taken twice daily and the diet was raised to C 120, P 70, F 100. He constantly showed sugar in the urine, and the insulin dose was raised to 10 units before breakfast, 10 units before supper, and 10 units at 2 A. M. There were no unusually low blood sugar readings until the morning of October 24, when the before breakfast specimen was 43 mg. per 100 c.c. of blood.

At 8:15 A. M. the patient was observed lying quietly in bed looking about, but refusing to speak. The arms were folded and spastic. He resisted efforts to give him orange juice. At 9:45 he became comatose, sweating profusely. Ten grams of glucose were given intravenously, whereupon he vomited a large amount of fluid and some orange juice. In a half hour adrenalin was given. He reacted on one or two occasions, spoke in monosyllables, but never appeared natural. At noon there was a convulsion, and a blood sugar taken at this time was 206 mg. in 100 c.c. of blood. Another 10 grams of glucose was given intravenously; the patient reacted slightly, but had another convulsion in an hour. There was urinary incontinence and frothing at the mouth during this attack. A blood sugar at 2:30 P. M. was 392 mg., the N. P. N. was 22 mg., and the CO_2 was 42 volume per cent. The knee jerks, biceps, and triceps reflexes were hyperactive; ankle clonus was present on the left, with a questionable Gordon on the right. No Babinski could be demonstrated. Both eyes showed a marked hippus reaction. Ten units of insulin were given at 3:45; because of the previous high blood sugar, we felt at this time that we were not dealing with a hypoglycemia, though it surely had started as such. The blood sugar at 4:15 P. M. was 333 mg., and the urine was loaded with sugar. Conditions grew progressively worse. Seizures occurred at intervals of five to ten minutes. There was considerable spasticity between convulsions. The blood pressure at 10 P. M. was 160 systolic, and 80 diastolic. At 10:45 P. M. the patient expired, seemingly from respiratory failure, as the heart continued to beat for several minutes after the cessation of respiration. A catheterized urine specimen immediately following death gave a strongly positive reaction.

Autopsy Findings.—An autopsy was performed the following day by Dr. C. I. Owen with the following positive findings: There was no change in any of the meninges, but some flattening of the convolutions. No tumor, abscess, or hemorrhage on gross section of the brain. In the left internal capsule some softening was found. The cerebellum was normal.

The heart was of normal size, with a "soldier spot" in the epicardium. Valves normal, some sclerosis of the coronaries. The aorta exhibited a diffuse thickening of the wall, the intima being thrown into longitudinal rugæ, characteristic of lues. Some arteriosclerosis was present. The process extended throughout the length of the thoracic and abdominal aorta.

The lungs both exhibited marked edema and congestion, with small areas of hypostatic pneumonia at either base.

The liver was of normal size, with considerable fatty degeneration. Gallbladder negative. Kidneys and adrenals were grossly negative. The pancreas was smaller than normal, and soft in consistency.

Microscopic sections taken from the cerebrum, pons, and medulla, exhibited a small round cell and plasma cell infiltration of the meninges. About many of the nutritive vessels was a small round cell and plasma cell infiltration with small gummatous formation in some of the walls. The aorta exhibited in the adventitia and outer media a marked fibrosis and a small round cell and plasma cell infiltration,

a great deal of the latter perivascular. The lungs exhibited marked edema and hyperemia with "herz fehlen" cells in the alveolar walls and alveoli. The pancreas showed normal acinar and insular structure without any interstitial changes. Some small round cell infiltration of the kidneys. Only a small amount of blood vessel thickening was here present. The adrenals show also some small round cell and plasma cell infiltration.

Pathological Diagnosis.—(1) Cerebro spinal syphilis; (2) Cardiovascular syphilis.

COMMENT

This case was rather confusing. The diagnosis was clouded because of the occurrence of glycosuria and high blood sugar readings without relief of the symptoms of hypoglycemia. There have been several communications in the literature which have attempted to show a relationship between the occurrence of convulsions, epileptic in type, and hypoglycemia. The most recent of these was by Griffith,⁷ who reported upon several cases in children, and found evidence that the convulsions were instigated by hypoglycemia. At one time we felt that this case might be one of true epilepsy occurring in a diabetic, also a very rare occurrence. Joslin⁸ states that he has seen no clear-cut case. Had a Wassermann been taken it might have put us on the right track, but it was in some manner overlooked. We feel that the basis for these convulsions was provoked or aroused from a state of quiescence by the occurrence of hypoglycemia. As long as this man pursued his ordinary course, with his diabetes under poor control, he had no difficulty. But when, more or less accidentally through diet and insulin, the inhibitory effect of his diabetes was removed, and he was given some low blood sugar values, a reaction was provoked, which in some manner, at present unknown, activated the luetic lesions in his brain, with the above train of symptoms, which were not then relieved by raising his blood sugar. More work should be done on this point. One effect of modern therapy for the diabetic may be to increase the incidence of these para-syphilitic manifestations, which seem to have been held in abeyance by the coincidental occurrence of diabetes. It will be of interest to note any change in the statistics in this regard twenty years from now.

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THE TREATMENT OF ALCOHOLISM

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The treatment of alcoholism in the United States has been accorded far less attention than it deserves. It is a much more serious disease than might be inferred from death certificates. The fact is often overlooked that alcoholism is a primary factor in many cases of pneumonia, septicemia¹ and insanity. Hence the importance of careful treatment of this condition. There are certain fundamental principles that must be remembered in treating alcoholism. Just as in treating any other disease, we must understand its pathology and how it is produced. A vast amount of literature, by careful workers, may be found on the pathology of alcoholism,² therefore, it will not be discussed here. It is also necessary to diagnose the type of alcoholism. We find it convenient to use the following terminology in diagnosis: acute alcoholism; sub-acute alcoholism; chronic alcoholism; intermittent alcoholism; and periodic alcoholism. Besides this any complication that is present may be added, such as delirium tremens, alcoholic hallucinosis, and Korsakoff psychosis.

Acute alcoholism is exemplified in so-called "social drinking," when the person drinks to be inconspicuous and not simply to obtain pleasure from the drug. There is no history of previous indulgence in alcoholic beverages in such cases. The sub-acute form is similar to the acute, except that there is a history of previous drinking, as well as pleasure obtained from the alcohol itself. In chronic alcoholism the patient has an irresistible craving for alcoholic beverages. Signs of mental retrogression are often obvious. In intermittent alcoholism³ the patient always has a history of commencing the drinking bout with friends. He starts with the purpose of being sociable, but is unable to stop, and progressively drinks more and more for a week or longer. Intermittent alcoholism is distinguished from the periodic form in that the former has no warning aura before, or definite interval between attacks of drinking. The periodic alcoholic has an interval of restlessness, irritability and insomnia before an attack of alcoholic indulgence. This may last from three to six days, and the patient will often say that he is unable to do his daily work during this period. When he finally starts drinking he will do so for weeks without stopping, until he suddenly becomes disgusted with himself and brings the attack to an end. Between times he is free from the desire for alcohol.

The following treatment is based upon the fundamental principles of diagnosis and pathology, developed from the study of six hundred and thirty-seven cases of alcoholism. This is divided into drug therapy and psychotherapy.

THERAPEUTIC PROCEDURE

Most alcoholic patients are nervous, restless and unable to sleep. Such patients should first be given a hot and cold contrast bath. They should then be placed in bed, and elixir triple bromides⁴ given in one dram doses every hour until sleep is produced. For the psychical effect the bromides may be given in various flavoring agents.

If the patient fails to respond to this within a few hours, two drams of paraldehyde⁵ may be given every two hours for three doses. If the patient is not asleep by this time give one-fourth grain of morphine sulphate⁶ and restrain the patient in bed if he is up and about. All sedatives should be rapidly decreased as the patient improves, and they seldom, if ever, have to be used after the third or fourth day.

In the meantime, alkalize the patient by giving him thirty grains of sodium bicarbonate in a glass of water every hour, or give an equal amount of some other form of alkali, as "mineral" water, or the like. Such a procedure will allay, as a rule, even the most serious case of gastric distress or vomiting. As a food, six ounces of milk may be given with two teaspoonfuls of maltose every hour. This may be alternated with malted milks. Both milk and alkaline beverages should be continued for a week or more. For the first two or three days, it may be well to give a saline cathartic in the early morning and a sodium bicarbonate enema at night.

A typical case is presented showing the usual results with this type of treatment:

A married man, aged thirty-seven, a musician, had been accustomed to alcohol since childhood. He admitted drinking at least a pint of whiskey a day for many years, often more than a pint. He was an only son, and his father was a brewer. His mother was considered nervous. The patient was actively hallucinated on admittance. He heard his orchestra playing, and he heard and saw different members of his family out of the window. He was disorientated as to place and time, although he knew the year and the month. He wanted to be out of bed so as to eat and work. He did not show any particular anxiety, but was sufficiently active that it was necessary to use slight restraints. The physical examination revealed a pulse rate of 108 a minute, and a blood pressure of 148 systolic and 102 diastolic. The pupils and extra-ocular movements were normal. There was no paralysis of the soft palate. The heart and lungs were normal. The liver was not palpable. Some tenderness was found over the stomach. The nerve trunks along the legs were tender. This was less over the arms. The triceps and biceps reflexes were present, but not increased. The same was true of the knee jerk and Achilles reflex. There was no Babinski. Diagnosis: Chronic alcoholism with acute alcoholic hallucinosis.

Under the treatment described above he was much better within forty hours after admission, and within forty-eight hours he was completely free from his hallucinations. All sedatives were discontinued the third day, and examination showed him to be practically normal at that time.

When the comprehension of the patient reaches normal, psychotherapy should be used. An attempt should be made to give the patient a new insight into life.⁷ He must be able to see himself as he really is, and what alcohol is doing for him. The best way is to show him cases like his own in the acute stage. The action of alcohol on the body with its pathology may be carefully explained. The goal of such procedure is to build strong inhibitions in the patient against the alcoholic habit.

Inhibitions thus established are often sufficiently strong to prevent the chronic alcoholic⁸ from returning to his old habits of drinking. The intermittent alcoholic, however, does not respond well to such treatment. The social life of such a patient must be changed also, and he should live for an indefinite period in an environment of total abstinence from alcohol.

The periodic alcoholic should see his physician at once when he feels an attack of alcoholism impending. If he is unable to do this, his wife or some other relative should be taught how to detect the prodromal symptoms, in order to call a phy-

sician when they first appear. Likewise, the patient should be given a new outlook on life. Other psychotherapeutic procedures should be used as outlined above. The results under such treatment have been gratifying, as shown by the following case:

A. B., a single man, aged thirty-five, a salesman, first took alcohol to excess at the age of twenty-two. He was a periodical drinker. Before each attack of drinking he was restless, irritable, and unable to sleep or eat for several days. He then indulged in alcohol from four to ten days, often ending in delirium tremens. Finally, feeling disgusted with himself, he would stop drinking. The patient was brought to the hospital by friends, during one of his attacks of drinking. He was very restless and irritable, complaining of a sensation of impending death. Examination showed no active hallucinations. His pulse rate was one hundred sixty with a blood pressure of one hundred forty-five over eighty.

Drug therapy was started at once, and he did not develop delirium tremens. After the third day psychotherapeutic measures were carried out, and on the tenth day after admittance he was discharged. The patient has been discharged a year now and has not drunk any form of alcohol since.

SUMMARY AND CONCLUSION

The diagnosis and pathology of alcoholism must be understood before successful treatment can be carried out. Drug therapy includes sedatives, alkalies, forcing fluids, saline cathartics, milk and maltose. Since the use of this treatment delirium tremens, developing after admittance to the hospital, is very rare. It is not necessary to use alcoholic beverages in the treatment of any form of alcoholism.

The psychotherapeutic procedure consists in making the patient realize his manner of living and comprehend the danger of such a condition to his existence. A change in environment, as well as various other subsidiary means, is helpful in some cases. Each individual case presents its own problem and deserves careful consideration in order to obtain the best results.

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FAMOUS MEN IN MEDICAL HISTORY

BENJAMIN RUSH

"The Doctor in Politics"

RANDOLPH G. ADAMS

Custodian of the Clements Library, University of Michigan

When Edmund Burke was explaining the American Revolution to the stodgy squires and the thick-headed East India nabobs who composed the British Parliament, he tried to tell the House of Commons that there were as many brains in America as there were in England. This was hard for an Englishman to believe. To a member of Parliament, however, the last word in wisdom was not a doctor, but a lawyer. Therefore, when Burke wanted to exaggerate the case, in the despairing hope that he might let a ray of light into the House of Commons, he remarked that all Americans were lawyers or smatterers in law. He then went on to point out that nearly as many copies of *Blackstone's Commentaries* had been sold in America as in England. Now Edmund Burke was not a voice crying in the wilderness. Most intelligent Englishmen knew that America was right in the controversy, and many of them said so.

In the year 1774, on the eve of the American Revolution, a flood of books issued from the British press pointing out the essential justice of the American cause. But more than this, the most learned of English political scientists discussed the matter, and published books about it. Of all that controversial literature, one of the most searching contributions was a three volume work entitled *Political Disquisitions, or An Inquiry into Public Errors, Defects and Abuses . . . calculated to draw timely attention of Government and People, to a due consideration of the necessity and the means of reforming those errors, defects and abuses; of restoring the Constitution, and saving the State*. You must overlook the flamboyant title—it was good eighteenth century style. The point is that in the year 1774 there was published in London a book written by one James Burgh, who, the professors of political science and history will tell you, was one of the ablest political writers and critics of his day. Despite the fact that it clearly pointed out that it was to England's interest, as well as the merest

justice, to listen to American complaints, the book fell rather flat in England.

The significant thing is that, although the book made little impression on England, yet within the year it was reprinted in America. Naturally, if Burke was right that all Americans were lawyers, or smatterers in the law, this book might have been expected to appeal to all classes of men who were seeking a legal method of extricating themselves from the toils of British domination. The Wm. L. Clements Library is exceedingly fortunate in having a copy of the American edition of Burgh's *Disquisitions* which bears a list of the names of the "Encouragers" or people who subscribed for copies before publication. Many of the most important names in Revolutionary America are to be found in the list. It is headed by that of George Washington. Then there is the name of Robert Aitken, who printed the first English Bible in America; Richard Bache, the printer who married Benjamin Franklin's daughter, and who was a regular Cyrus H. K. Curtis in his day; there is the name of John Dickinson, who wrote the *Farmer's Letters*; of Silas Deane, the first American diplomatic envoy ever sent to a foreign government; there is John Hancock, President of the Continental Congress, who signed the Declaration of Independence; Michael Hillegas, the first treasurer of the United States; Thomas Jefferson, author of the Declaration and later President of the United States; Mifflin and McKean, the war governors of Pennsylvania; James Rivington and Hugh Gaine, the principal printers and newspaper men of New York; members of the Continental Congress from Massachusetts to Georgia; business men from all the colonies; Major-Generals such as Anthony Wayne and John Sullivan; ministers of the Gospel, who were all politicians and lawyers on the side; in fact, every walk of life was represented in the advance sale of this book. Among others there were three doctors.

Between the names of the great colonial

jurist, Jacob Rush, and that of the colonial artist, William Rush, appears the name of "Dr. Benjamin Rush." Do not ask me why Benjamin should appear between Jacob and William—it was probably an eighteenth century idea of alphabetical order, and the firm conviction that lawyers ought to go ahead of doctors.

Now a lawyer, you know, is a man who gets two fellows to strip for a fight, and then steals their clothes. A doctor does not do anything like that—if there is any fighting going on you can be sure the doctor will be in the middle of it.

That Benjamin Rush was a fighter is amply attested by the fact that when he was elected to the Pennsylvania Legislature in 1776, he was made chairman of that Committee which recommended to Congress "that it is expedient to declare independence," thereby getting himself and his country into one of the most glorious fights of history. You must not, however, think that this was a perfectly normal thing for an American to do under the circumstances. There is nothing in history more fallacious than the idea that America wanted independence. When the first Continental Congress met in 1774, practically nobody wanted independence—and the members of Congress contented themselves with sending pious notes and memorials to his gracious Majesty King George III. Congress then adjourned and waited for its good and great King to take some notice of its petitions. The said great and good King responded by sending out several thousand troops and shooting up his beloved subjects in North America. So when the second Continental Congress met in 1775, the battles of Lexington and Concord had already been fought. Nevertheless, the long suffering patience of the American people was evidenced in an astonishing form. Despite the fact that troops of His Britannic Majesty were already busy killing Americans (or getting killed by the Americans), Congress met in the firm resolve not to demand independence. George Washington himself seems to have opposed independence. What the Americans wanted in the preliminaries of the Revolution was Dominion Self-Government such as is possessed by Canada, today. It was not until more than a year later, in July of 1776, that Congress finally voted for independence.

We next find the doctor as a member of the second Continental Congress, which upon July 4, 1776, resolved to pass the Declaration of Independence. Doctor Rush's participation in that notable event emphasizes the anachronism involved in John Trumbull's painting of the Signing of the Declaration of Independence. You are all familiar with the Trumbull painting, as it appears in every school library. The event is often spoken of as having taken place on July 4. As a matter of fact, although Benjamin Rush was one of the signers, he was not even elected to the Continental Congress until July 20—more than two weeks after the immortal first Fourth of July. The fact is, of course, that although the act of independence was resolved on the Fourth, the signatures of the members were being affixed for weeks, and even months, afterward, and it was not until the autumn of 1776 that all the signatures which now appear on the document were finally placed there.

But after all, the Declaration of Independence was a destructive act—the more important work of organizing the Articles of Confederation took Congress many months more. The troubles came, of course, over states' rights. These thirteen so-called free and independent nations objected strenuously to laying aside their states rights and their sectional interests and jealousies even for the purpose of winning the war in which they were all engaged. I think it is some commentary upon the character as well as the mentality of Benjamin Rush that from the beginning he was one of those who fought most fiercely for a real federal government, a central government which should have the power and authority to compel the coöperation of the thirteen states.

The problem which confronted the members of Congress was the fact that the states were of unequal size, unequal importance, and unequal representation in Congress. Pennsylvania and Virginia were large states; Delaware and Rhode Island were small states. Should Delaware have the same rights to block legislation that were possessed by the more populous Pennsylvania? It is an old, old question, and precisely the same one as that raised in Congress in 1929 by eastern senators who inquired why the sons of wild jackasses from the Dakotas should have as many representatives in the United States Senate as were possessed by

large states like New York and Pennsylvania. Dr. Benjamin Rush's query of 1776 remains today unanswered. Although Rush fought hard for the destruction of state distinctions, and the representation of people, rather than square miles of empty territory, still he was voted down. What was worse, the Continental Congress, voting by states, could not act in any important measure without the unanimous consent of the states, which was, of course, an impossible provision. Rush saw clearly that the Americans were hypnotizing themselves with the slogan or shibboleth of "independence." One could not pay the army nor shoot the British troops with the word independence. Said Rush, "We have been too free with this word independence—we are, in fact, dependent upon each other—not totally independent states."

During his service in Congress, Benjamin Rush was an intimate friend of John Adams, and frequently entertained Washington at his house when the Commander-in-Chief was in Philadelphia. However, he was not long permitted to serve in Congress, for in April of 1777 he was made Surgeon-General of the Hospitals in the Middle district, and in July, Physician-General of the same.

The plight of the Medical Corps of the United States Army in these first years of the American Revolution has been so ably stated by my colleague, the late Prof. Claude H. Van Tyne, that I venture to quote from him:

"So black is the story of the hospital service in the Revolution that one can tolerate it only by bearing in mind the extraordinary conditions during the war, and how primitive was the medical science of that day. . . .

"Washington begged Congress for reforms that would spare his eyes and ears the looks and complaints of men perishing for want of proper care. Still the directors of regular and of regimental hospitals quarreled over stores and equipment, until General Greene ironically wrote that it seemed to him immaterial 'whether a man die in the General or the Regimental hospital.' Men sick in the care of regimental surgeons, he declared, were in a wretched situation, and nothing struck 'a greater damp' upon the spirit of well men than the miserable condition of the sick, a spectacle shocking to human feelings, and sure to hamper the recruiting of a new army. Soldiers were

heard solemnly to swear never to serve again unless there was a better supply of medicines. Hundreds were dying daily from a 'shameful,' even 'inhuman' neglect, because the general hospital could take care of only half the sick, and the regimental hospitals had no medicines nor supplies beyond the rations of a common soldier. Complaints were rife that regimental surgeons abused their trust and embezzled the public stores, but, cried Greene, such losses were trifling compared with what the army suffered from want of supplies withheld so that they might not be stolen. . . .

"Moreover, the surgeon worked at times in hospitals shocking to humanity, a 'house of carnage,' as Wayne wrote of the one at Ticonderoga—no medicines, no beds nor even straw to lie on, and no covering. When blankets and clothes were lacking, Congress made the brilliant suggestion of stoves as a substitute. As a result, some soldiers went to a hospital, not because they were sick, but to keep warm.

"As to shelter, a 'hospital' might mean anything from a thin tent to an erstwhile church. Usually the quarters were cramped, and men were herded together in barracks, hastily built huts, barns, outhouses, or, at best, taverns, college buildings, courthouses, or fine old mansions, surrounded by gardens and orchards. Horrible sights might be seen in the worst. One witness, who entered the hospital at Ticonderoga, found one man lying dead at the door, and, just inside, two more dead, with two living men lying between them. . . .

"As to medicines to be found in these wretched places, where at times more than a fourth of the army was confined, there was 'no emetic, nor cathartic, nor mercurial nor antimonial remedy, no opiate nor elixir tincture, nor even any capital medicine,' wrote one desperate physician. The finding of a chest of lint for wounds was reported as if it were a chest of gold. At Fishkill, in the winter of 1776, one hundred men were unfit for duty because there was no sulphur to cure them of the itch. The armies in the South could never get enough 'Peruvian bark' to fight the deadly malaria. Even the allowance of soap was so small that Washington attributed much of the disease in the army to dirtiness. Many 'putrid diseases' were ascribed by him to the large quantities of animal food 'untempered by vegetables, or vinegar or any kind of drink

but water;’ and this in the midst of a rich farming country, and in a land that never even dreamed of an Eighteenth Amendment.”*

Benjamin Rush served only eight months as surgeon-general. It is while holding this office that the doctor in politics may be seen in his most political aspect. The principal army hospitals under his jurisdiction were at Princeton, New Jersey, and there Rush spent a great deal of his time. Associated with him was his fellow Philadelphia physician, Dr. William Shippen. Now Dr. Benjamin Rush and Dr. William Shippen got along together about as well as two fighting cocks. Benjamin Rush was a sincere and fierce Republican and a patriot. The Shippens were wont to trim their sails to meet the storms in which the fortunes of war fluctuated.

During the year 1777, when Rush was Surgeon General, his Philadelphia neighbor, General Thomas Mifflin, was Quartermaster General. General Mifflin was far from an efficient and satisfactory supply officer. The awful suffering of the winter of Valley Forge is in a large measure traceable to his mismanagement. Hence, the Commander-in-Chief, General Washington, had to get rid of him.

Dr. Shippen was charged with similar mismanagement and came into violent conflict with his colleague Rush. Now the Shippens were socially and politically a powerful family in Philadelphia. The result was that, instead of Rush getting Shippen removed, Shippen and his friends got Rush into such a position that he had to resign.

George Washington supported Shippen. This may seem odd, and it is my own belief that Washington was badly advised by some Pennsylvania politicians, and did not know the facts. But one must consider the circumstances. This was the latter part of the year 1777. Burgoyne and his army were coming down from Canada. Washington was fighting desperately at the battles of Brandywine and Germantown to save Philadelphia from falling into British hands. In this he failed and his army was pretty badly used up—particularly as he had sent off to Gates some of the best of the Continental Army to meet the oncoming Burgoyne. Naturally Washington had a great many things on his mind besides the quarrels of

the Medical Department. In a letter to Abigail Adams, the wife of John Adams, Rush said he retired from office because he had no prospect of support in doing his duty, either from Congress or from the principal officers of the Army. Congress, sitting in Philadelphia, was certainly influenced by the Philadelphia politicians, among whom the Shippens were powerful.

Upon his retirement, Rush was naturally disgusted with Washington, and he therefore entered upon a conspiracy to get the Commander-in-Chief dismissed. There were grounds for this. The campaign of 1777 had produced one glorious victory, when General Horatio Gates had defeated and captured General Burgoyne and his entire army. But the American Commander-in-Chief, George Washington, had been thoroughly and soundly defeated at Brandywine and Germantown, and had lost the city of Philadelphia to the British General Howe. Therefore Benjamin Rush joined those who insisted that Washington be displaced and Gates be put in supreme command. This conspiracy centered around the Frenchman, Count Thomas Conway, who had been a Major General in the American army. Rush wrote an anonymous letter to Governor Patrick Henry of Virginia, suggesting that Washington was a failure and that Gates be made Commander-in-Chief. Rush promoted the same idea in Congress. Here he met ready support, because Mifflin, disgruntled at having been removed as Quartermaster General, had his own grudge against Washington. Meantime, another disgruntled American General, Charles Lee, had been sending broadcast letters expressing his discontent with Washington, and Lee had many friends in Congress. Gates’ victory at Saratoga made him the popular hero and soon a considerable body of political opinion supported Rush in his efforts to have the Commander-in-Chief removed.

At this point General Conway made the mistake of talking too much. He wrote a letter to Gates, extolling the latter and expressing the utmost hostility toward Washington. Gates had the bad taste to show this letter to all of his staff, among whom was his Adjutant General, the famous marplot James Wilkinson, who was afterward mixed up in the Aaron Burr conspiracy. Wilkinson was one of those men who, when sent with dispatches to Congress, stopped at every country house where there were

*C. H. Van Tyne. *War of Independence*, published by Houghton Mifflin and Co., 1929, pp. 280-285.

pretty girls and good cellars. On one of these expeditions, he got so hilarious that he told a number of American army officers just what he, and Rush, and Conway and Gates and Mifflin thought of Washington, and also revealed the fact that they were out to secure the removal of the Commander-in-Chief. The news of this roistering party was conveyed to Washington's aid-de-camp, Alexander Hamilton, who promptly told Washington.

Washington struck back in characteristic and deadly fashion. He asked Gates whether the Conway letter was a fact. Gates wrote evasive and contradictory replies. Then Washington subjected Conway to such a grilling that that officer resigned from the army. Then Washington ascertained that Benjamin Rush had written the original anonymous letter to Patrick Henry (which Henry, with due loyalty to Washington, had passed on to the Commander-in-Chief). Washington got the original letter and recognized it as being in Rush's handwriting. When the politicians in Congress were confronted with the demand of the Commander-in-Chief that all cards be laid on the table, all ran to cover, and Benjamin Rush ran along with the rest.

This episode is known as the Conway Cabal, and Rush's share in it is no credit to him. However, at the time, nobody except Washington and Henry were sure of Rush's part in the conspiracy. Moreover, in the middle of a war there is no time to settle private quarrels, so Washington, his position now stronger than ever, dismissed the affair from his mind, and Gates and Rush, at least, were able to retain their reputations as patriots. Incidentally, it ought to be pointed out that this is just one of those rows which may occur between the best intentioned men during a war. Rush returned to Philadelphia and resumed his private practice of medicine and his professorship in the University of Pennsylvania Medical School.

However, Doctor Rush was not yet through with politics. When the war was over and won, the old problem came up of making the United States into a nation. The Continental Congress had throughout the war shown itself futile as a government. The period between the years 1783 and 1789 has been called the critical period of American history, because during those years the United States had no government

worthy of the name. When we had drifted about as far in the direction of anarchy as was possible, the Federal Convention of 1787 met and framed the Constitution of the United States. This was a great and difficult task, but it was a task equally as difficult to secure the ratification of the thirteen states to the Constitution. Each state was obliged to call a convention where-in the new constitution was considered and voted on. To get these state conventions to ratify was, in fact, one of the most important crises in American history. Dr. Benjamin Rush was one of the members of the Pennsylvania Convention and throughout 1788 he fought for the acceptance of the Constitution by his own state, Pennsylvania, and his efforts were finally crowned with success.

Historically we cannot rank Benjamin Rush as a great specialist in his profession, but among the things this world needs other than specialists are the men of some intellectual attainment who can master several fields with real distinction. This I believe Benjamin Rush did. It is to me a matter of considerable interest that Benjamin Rush wrote an essay entitled "An Inquiry into the Influence of Physical Causes on the Moral Faculty." I believe his essay did not point out anything very startling, but to me it is significant that a man in the eighteenth century was thinking in those terms. His essay entitled "An Account of the Influence of the Military and Political Events of the American Revolution on the Human Body" certainly is a stimulating subject. I might be inclined to question his diagnosis in several instances, but still he was thinking on an important subject. For example, when the news of the Surrender of Cornwallis was brought to Philadelphia, the janitor at Independence Hall died of the shock. On being asked to pronounce on the case, Doctor Rush said the man died of an acute attack of political joy, which is not so bad.

His incidental essay on the duties and the virtues and vices of physicians contains much advice to doctors which is a good index as to the state of society in those days. He tells all young doctors to begin practice by going into the country and buying a farm. The reason for this is that in the slack season the doctor may have something to keep him out of trouble. Rush seems to have been impressed with the fact that many of his professional colleagues were too fond

of the flowing bowl. It is difficult for us to conceive of the modern doctor having seasons of the year when no one is sick, and therefore when he has so much time on his hands that he simply must go out and get drunk—but Rush's warning on the subject indicates that this may once have been true. Today, we hear of doctors taking to drink for the opposite reason—the fact that they are overworked.

In his essay entitled "Observations on the Duties of a Physician, and the Methods of improving medicine accommodated to the present state of society and manners in the United States," Doctor Rush ventures the opinion that the doctor ought to go into politics. The physician by his contact with people learns so many things, and gains such an insight into so many subjects, that his country ought not to be deprived of the benefits of his experience in all walks of life. At the same time, he warns his colleagues against too intimate association in the families of his patients. He felt called upon to advise young doctors not to take a drink at the house of every patient. Indeed, he felt doctors ought not to drink before mid-day in any case.

Doctor Rush's maxims in regard to sending in bills for professional services are worth a glance. Says he, "I shall now give you some directions with respect to the method of charging for your services to your patients. When we consider the expenses of a medical education, and the sacrifices a physician is obliged to make, of ease, society and even health, to his profession; and when we add to these the constant and painful anxiety which is connected with the important charge of the lives of our fellow creatures, and above all of the inestimable value of that blessing which is the object of his services, I hardly know how it is possible for a patient sufficiently and justly to reward his physician.

But when we consider on the other hand that sickness deprives men of the means of acquiring money; that it increases all the expenses of living; that high charges often drive patients from regular bred physicians to quacks"— There is, of course, the other side of the picture.

Rush insisted that in making out bills the doctor should consider the number and time of his visits, the nature of the patient's disease, his rank in his family or society, and above all, whether the patient is rich or poor. Rush felt that the patient who insisted upon calling in other doctors for consultation on every trifling occasion ought to be willing to pay all the doctors a somewhat higher fee, and further advised that accounts be sent in as soon as possible after the patient recovered—because he might get sick again and not be able to pay at all.

Our good doctor also had some ideas on how the physician might learn outside of the ordinary methods. You would probably agree with him that all improvement in medicine is not to be derived solely from colleges and universities, and that the facts which constitute real knowledge are to be met in every walk of life. I wonder whether we would secure unanimous consent to the proposition that doctors ought to seek out quack physicians and learn from them, too. I was somewhat surprised to read that Rush recommends that doctors learn by conversing with nurses and old women. Says he, "They will often suggest facts in the history and cure of diseases which have escaped the most sagacious observers of nature. Even negroes and Indians have sometimes stumbled upon discoveries in medicine." I do not know whether many of you intend to get part of your education that way, but I can only say that if you do, and if I am ever a patient of yours, you will not tell me until after you have cured me.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Commissioner

LANSING, MICHIGAN

INDUSTRIAL HYGIENE NOTES

One of the objectives of the Bureau of Industrial Hygiene is to aid in the promotion of health education of employees. The aim is to impress the individual worker with the fact of his personal responsibility for maintaining the best degree of health pos-

sible, and to advise him on the best methods or means of attaining and keeping it.

A large number of corporations, today, go far beyond the requirements of the Workmen's Compensation Law in their health work, and spend a great deal of money on means to maintain a high grade

of health and efficiency in their employees. Such corporations have learned by experience that health is an important factor in accident prevention. In this connection they have learned, also, that it is as important to know the physical fitness and safety of the worker for his job and how well he can function, before he is assigned to it, as to know the perfect construction and performance of a machine before it is installed; that the human element is as important as the mechanical for production.

For this reason, a great number of firms are requiring a careful physical examination of all applicants before they are permanently accepted for employment. Where remediable defects are discovered, and especially where they are of a progressive nature as to severity, or detrimental to the efficiency of the employee, a correction is urged, and in certain cases required, before permanent employment is assured. In such cases many firms will aid the employee in getting the necessary corrections. Such methods require more than a mere health inspection of the applicants when they enter the employ of a firm.

While physical examinations are generally considered of prime importance, their value depends on their time, scope and thoroughness. In some firms the preliminary examinations are found to be very superficial as to requirements, while in others they are performed so perfunctorily as to mean little in getting an exact picture of health conditions among employees, and thus fall short of the full benefits they should afford to all concerned.

The firms that make most thorough preliminary and periodic physical examinations in order to properly place their workers, as well as to detect and help to correct physical disorders in their incipency, report less loss from illness and from actual labor turnover. From these examinations the physician and nurse have opportunity, in their health departments, to give individual instruction in health habits and about preventive and corrective measures to be carried out by each employee, as needed, through the service of his home physician. These firms are thus able to retain longer and continuously the services of their efficient workers. They declare that such provisions always bring good returns on their investment.

It is gratifying to the State Department

of Health to find an increasing number of firms stating their intention to conduct physical examinations of applicants and more of them providing periodic examinations for all employees. Certain discoveries in these examinations prove to be of great public health value.

From many firms and physicians concerned with preventive measures in industrial practice there have come requests for a comprehensive form of physical examination blank for industrial employees. This bureau is endeavoring to secure or devise a generally acceptable form of examination blank to recommend to industrial, mercantile, public utility corporations, and others when desired. It is also the aim of the bureau to acquaint employers with the many benefits that result from the physical examination of employees which should be the first step in a well organized health department. Any plan to be of great value must be generally accepted. Uniformity in these procedures would help to standardize this important feature of health work and make the records of greater value to all concerned in a constructive health service in industry.

F. A. P.

UPPER PENINSULA PUBLIC HEALTH CONFERENCE

The Upper Peninsula Public Health Conference was an unprecedented success, with 183 persons registered and many more than that in attendance. The evening meeting which was addressed by Dr. William A. Evans of Chicago drew an audience of 700.

The conference was sponsored by the Michigan Public Health Association and the Michigan Tuberculosis Association, and was the first of its kind held in the Upper Peninsula. Both the people of the Upper Peninsula and the press showed a keen interest in the program, which included many speakers of national prominence. At the closing session the audience went on record as desiring that the conference be an annual event.

DR. YOUNG RECEIVES APPOINTMENT

Dr. C. C. Young, director of laboratories of the Michigan Department of Health, has been appointed Professor of Preventive Medicine and head of the Department of Preventive Medicine of the Detroit College of Medicine and Surgery. He will continue in his usual capacity in Lansing, having supervision of the work in Detroit.

HEALTH EDUCATION FOR TEACHERS

A coöperative plan has just been put in operation whereby the Children's Fund of Michigan makes it possible for the State Department of Public Instruction to offer additional work in health education in the four state teachers colleges and increased supervision and assistance to teachers in the field.

Four people especially trained in health education have been placed in the four state teachers colleges, and a fifth in Marygrove College, Detroit. In addition, a director of health education has been added to the staff of the Department of Public Instruction to correlate and advance the department's work along this line. A recent addition to the Children's Fund staff is a specialist in health education who will work especially with the public health nurses in the counties carrying on work under the Fund.

As a part of this broad program, a new course of study in health education has been prepared in the offices of the Department of Public Instruction and will be ready for distribution to the teachers of the state by the middle of October. This first course, which is planned especially for rural schools, will be followed by a second, worked out for twelve-grade systems.

CHILD HYGIENE NOTES

Miss Helen Linn has joined the field staff of the Bureau of Child Hygiene and Public Health Nursing, to do special work in nutrition and child training. Miss Lynn received her nursing training at the University Hospital and graduated from Michigan State College, majoring in nutrition. In addition, she has done special work at the Merrill Palmer School in Detroit.

Charlotte Ludington, R. N., leaves the Bureau of Child Hygiene and Public Health Nursing on October 13 to become Assistant Secretary of the State Board of Registration of Nurses. Miss Ludington has been with the bureau since 1922. Miss Margaret A. Bulkley, R. N., will fill the position of district supervisor left vacant by Miss Ludington's resignation.

Child care classes in Emmet and Charlevoix countries are being taught by Bertha Cooper, R. N., and in Iron county by Julia Clock, R. N.

The study of births survived by the mother is progressing satisfactorily. Dr. Alexander and Dr. Case have been working in the southern and eastern sections of the state.

WHOOPIING COUGH RECOGNIZED WITHOUT WHOOP

Delay in quarantine of whooping cough which exacts a death toll twice as large as scarlet fever is deplored by Dr. Louis W. Sauer and Leonora Hambrecht, of Evanston, Ill., in a report to the American Medical Association, recommending early diagnosis by the cough plate method.

Under the present system of diagnosis, quarantine is not usually established until after the period of greatest contagion has passed, these authorities charge. This is because the familiar whoop does not appear until the illness is well advanced. It is not necessary for the doctor to await this symptom in a suspect case, however, as the pertussis bacillus which causes the whoop can be detected by cough plates or discs which are held three or four inches from the patient's mouth during a coughing spell.

Cough plates are made with a coating of boiled potato, glycerin, agar, and blood mixture, prepared under conditions most favorable for the speedy growth and detection of the whooping cough bacillus. To properly expose them for diagnosis, a deep explosive cough is desirable. Should the patient prove unable to cough to order, a drink of cold water, a brisk run, or a forceful slap between the shoulder blades is usually effective in bringing on an attack.

Successful trial of the cough plate method of diagnosis has been made by the Copenhagen Health Department, while in America the Commission for the Study of Whooping Cough has reported favorably on its use.

Importance of the early detection of whooping cough is in the prevention of epidemics. In the treat-

ment of individual cases it is not particularly helpful, and the course of the disease is little influenced by diagnosis.—Science Service.

INFANTILE PARALYSIS EPIDEMIC
THREATENS

With 490 new cases of infantile paralysis just reported to the U. S. Public Health Service, Washington, for the week of September 13, it is feared that the outbreak may reach epidemic proportions. The total is now higher than it has been for several years. Last week's increase over the week before was 128 cases. No predictions can be made as to how far the outbreak will go, but state and local health officers throughout the country are very much concerned over the continued increase in the number of cases. The situation in Kansas is especially serious, where 71 cases were reported for the last week alone. Other states reporting large numbers are: Ohio, 65; New York, 60; California, 56; Illinois, 36; Massachusetts, 21; Minnesota, 28; Michigan, 10; Maine, 10; Iowa, 20; and Oklahoma, 11. Health officers are advised to arrange for the collection and distribution of the convalescent serum which has been found helpful in treating the disease. Isolation of patients is, of course, necessary. Parents are advised to keep children out of crowds and away from strangers. Because treatment is only successful in the early stages, before paralysis has set in, parents should lose no time in consulting a doctor if a child shows any suspicious symptoms. The method of transmitting the disease is not known, which makes its control particularly difficult.—Science Service.

THE JOURNAL

OF THE

Michigan State Medical Society

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NOVEMBER, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

CLINICS AGAIN

In this number of the Journal appear contributions by Dr. Norman E. Clarke and Dr. Saul Rosenzweig on the situation of the charity patient. This is a more or less recrudescient subject and one which is not apt to become exhausted by one or two papers. The study is made upon an investigation of conditions as they obtain at one of the Detroit clinics. The findings are significant as to what might be expected if the same two physicians were to investigate the conditions of any other similar clinic of this state. We believe it is, as one of the authors says, a representative cross section as well as a study in human behavior.

It is explained that the trained social worker is usually a paid employee, while the physician *gives* his time and skill to clinic work, which probably accounts for the difference in view of the two regarding the eligibility of those entitled to clinic service. Those physicians who give their time and skill in attending clinic patients are entitled to certain consideration and protection, according to one of these essayists. To this we give our unqualified assent.

Of the clinic patients considered, the smallest monthly income was \$11.00 and the largest \$336.00; the average monthly income was \$145.00. We fail to see why a person whose income is \$336.00 a month should be admitted to any kind of clinic the object of which is charity. One-quarter of the eighty-four patients considered owned property, acknowledged by the patients themselves to be worth an average of \$7,300. We would infer from the study that at least 25 per cent of the patients should have consulted private physicians. These figures were given voluntarily. A thorough investigation, such as a financial credit man might make, would show doubtlessly a higher number who should consult the private doctor. The failure of social workers to exclude such groups is not only an injustice to the medical practitioner who is striving honestly to meet his obligations to his family and the municipality, but it is also an unjust imposition on public funds contributed to the operation of free clinics for the indigent sick.

These two papers contain other data of importance and interest. The clinic in which the study and investigation was made is no more inefficient, nor perhaps efficient, than similar clinics in any other city or town in Michigan. All are staffed by many of the best men in the profession, conscientious and proficient, whose services are as unstinting and genuine as they would be to patients in the privacy of their own offices or in the patients' homes.

IS HEALTH CONSCIOUSNESS A MISTAKE?

Dr. Robert Hutchison, a London physician and author on dietetics, attended the Winnipeg meeting of the British Medical Association, where he scored severely the food faddist, the physical perfection crank, the

over-anxious parent and the advocate of periodic health examinations. Health, he said, was like happiness, to be found if at all by the wayside; the more one pursued it the more it eluded him. Health was a broad paved road and nature was both a good road maker as well as a road mender. He knew of only one rule that would apply to health as to other things, "He that striveth for mastery is temperate in all things."

The diet faddist was the worst nuisance; "one swears by whole meal bread," said he, "another by sour milk; vegetarianism is the only road to salvation in the eyes of some; others insist not only on vegetables only but on eating them raw; others are crazy about vitamins and roughage." Raw vegetables might be left to the herbivorous animals and vitamins could look after themselves. Vegetarianism was, he thought, quite harmless except that it was apt to fill a man with wind and self-righteousness.

Dr. Hutchison deplored the tendency for parental over-anxiety to increase. The rearing of an infant now required the combined knowledge of a chemist, a psychologist and a public health officer. Too much fussing over children was productive of nervousness. Many parents had a morbid dread of infectious diseases; as a result children did not have the so-called diseases of childhood, such as measles and whooping cough, until late in the adolescent period of life; whereas, the speaker claimed that such diseases were best borne between the ages of five and ten. To protect children against infection would be the proper thing to do if there were any chance of escaping permanently these so-called diseases of childhood which were considered as conferring immunity.

Hutchison approved of sanitation and the prevention of food adulteration but considered it ill advised to make members of a community over-solicitous in regard to their individual health.

Periodic health examinations came in for the speaker's condemnation. Most of the defects such examinations reveal it would be better if the patient knew nothing about. "In everyone, after a certain age, the machine shows signs of wear and tear but although the paint is a bit scratched and a cylinder misses occasionally, it is wonderful how well it gets along if one does not worry too much about it." Again, "there is a good

deal of nonsense talked about the *beginning* of disease. Most diseases either cannot be detected early, or, if they are, little can be done to stop them unless one is prepared to give up for the sake of life all that makes life worth living"; and this, "let us therefore cultivate character and let health look after itself, being assured that to a nation made up of men and women of character, all things, health included, will be added. For it is true, I believe, in the bodily as well as the spiritual sphere, that he that shall save his life shall lose it."

Some of this may seem rank heresy but it is at least stimulating.

THE MARGIN OF SAFETY IN THE KIDNEY

The human kidney, like many organs of the body, operates with a considerable margin of safety. Disease conditions may affect the organ over a period of time before the reserve forces of the kidney succumb and the body suffers from renal inefficiency. Professor E. B. Verney of the University of London, who has investigated the problem, believes* that the capacity of the kidney to do increased work depends both upon a structural reserve, i.e. the quantity of inactive renal tissue, and a functional reserve, i.e. the amount of possible increase in the functional activity of the active renal units.

The direct observations of Richards and his collaborators upon the frog kidney, indicating an intermittance of glomerular circulation, give proof that all the units of the kidney do not function at once. Evidence that all of the four and a half million glomerulo-tubular units in the human kidney do not function at the same time is lacking, but mammalian experiments suggest that this conclusion is probable. The two kidneys ordinarily secrete different amounts of urine over a particular time interval, one and then the other becoming more active. A high rate of secretion of urine is ordinarily associated with a dilution of the solid constituents of the urine toward their concentration in blood. Occasionally samples of urine simultaneously collected from the two kidneys show deviations. The larger sample may be more concentrated than the

*E. B. Verney, The Reserve Forces of the Kidney, *Lancet*, July 12, 1930, p. 63.

smaller. The inference from this variation is that in the kidney from which the larger sample came, more units are active than in the other kidney and that the average rate of secretion is less.

The functional reserve is demonstrated by the reaction of the kidney to interferences with the amount of renal tissue. When part of the kidney tissue is removed surgically or by occlusion of part of the renal blood supply, so that only a small amount of kidney remains, activity results in a polyuria in which there is a decreased percentage of urea. With the removal of greater amounts of renal tissue the polyuria increases. In other words, when more than the structural reserve of the kidney is removed the remaining units respond by an increased activity.

Perfusion experiments on the isolated kidney indicate that a rise in pressure of the perfusing blood increases the rate of secretion, the urine being less concentrated. It seems fair to assume that, when only a part of the kidney is allowed to function in the body at the normal blood pressure, the polyuria which results is in reality associated with an increased pressure upon the secreting units. This reaction is a definite dwindling of the functional reserve.

Secretion is not, however, only a function of the pressure of the blood. Another factor, the tone of the epithelium of the renal tubules, must be considered. The cells of the tubules presumably do not alter their type of response with alterations of blood pressure. They have a characteristic intrinsic response or tone. A physiological diuresis (dependent on increased glomerular pressure) probably would not involve an increased activity of tubular cells. We may thus account for the polyuria of physiological diuresis as due to an increased filtration pressure in the glomerulus with no equivalent increase in the secretory activity or tonus of the tubular cells. This we may consider to be the normal mechanism associated in the functional reserve of the kidney.

A pathological diuresis may be associated with a diminution of response of the cells of the tubule with a resultant increased flow of urine and "a lack of correspondence between this epithelium and its environment, both of which are signs of a fallen reserve."

THE JOURNAL

The 110th annual meeting of the Michigan State Medical Society marks another milestone in the annals of the organization. Many papers carefully prepared setting forth the progress of medicine during the past year were presented with discussions which stimulated thought and interest. These will constitute to a large degree the contents of this Journal for the coming year. Of equal importance to attendance at the section meetings is the preservation in permanent form of papers and discussions that they may be more thoroughly digested in the quietude of one's study.

The State Medical Journal is in a sense unique among publications in that it is owned by the physicians of the State who are members of the medical society. It is hoped that this proprietorship is looked upon less nebulously than ownership in some public utility. Being a more or less specialized piece of property we hope the members of the profession consider it a more intimate possession than the waterworks or the street railway. The council of the Society have sought to emphasize this feature of the society's activity and to make it a worthy medium of expression. While observing the demands of economy, they have wisely felt that they are carrying out the wishes of the membership in getting out a journal of a high degree of technical excellence.

The policy of the publication committee is that the Journal shall contain from month to month what is of greatest interest to the largest number. A state medical journal can be in no sense a specialist journal. Yet the specialist who is not interested in and concerned with the general field of medicine is deliberately limiting his field of usefulness. The policy of a state journal must also include a clear statement of the professional and social problems of medicine even though their solution may not be immediately possible.

And we feel that to include timely discussions of the history of medicine is clearly within the legitimate field of a state medical journal.

THE PROBLEM OF THE AMERICAN STUDENT

The medical schools of the British Isles are experiencing a difficulty in the matter of applications from prospective medical

students from the United States. The applicants are so numerous that their admittance to the study of medicine in British medical colleges would interfere seriously in the way of crowding these institutions. The British Medical council has decided to limit the number to those who would be accepted in the Class A medical schools of the United States. This will not materially mend matters. There was never a time in the history of this country when there were so many well qualified pre-medical students. While the requirements for the study of medicine are a four year high school course followed by two years in University, thousands apply whose qualifications are much more advanced and they are denied admittance for the simple reason that the medical schools cannot accommodate them. There is scarcely a first class medical school in the United States with the facilities for accommodation of unlimited numbers, nor is there likely to be in the near future. The expense of operating a medical school with its fully equipped laboratories and high grade teaching staff is greater than that of any other department. Not only so; the supply of doctors is adequate to, if not greater than, the public demand. The real problem is the distribution, which would not be helped materially by increasing the number.

So long as medicine appears so attractive to the uninitiated there will be a plethora of applicants, and that portion of the overflow who can afford it will seek admittance abroad.

EUTHANASIA

Among the noted members who attended the British Medical Association at Winnipeg was Lord Moynihan. In an interview given in Montreal before embarking for England, he stated his objection as follows to the proposal that persons suffering from incurable disease be given a painless death.

"The medical profession would never take that responsibility itself. I should think the written consent of the person concerned would have to be secured, and that would make it more a matter of law than of medicine. Besides no one can measure the value of life. I think that often the happiest time of life is the last few days or weeks, when people have resigned themselves to the approach of death. People aren't afraid of death; they meet it calmly.

Moreover, it is impossible to say that a person is incurably ill. Wrong diagnoses are made sometimes, and sometimes people apparently incurable recover, or live happily for years in spite of ill health. The business of the medical profession is to prolong life and relieve pain. We won't consider cutting a man's life short, but we don't let him suffer."

UROSELECTAN

We would call our readers' attention to a communication by Dr. Robert E. Cumming of Detroit which appears in this number of the Journal, on the subject of Urography. The employment of intravenous pyelography is scarcely more than a year old. It bids well in selected cases to be a valuable diagnostic method. However, like a great many innovations, it is heralded abroad as a measure that is tended to supplant older and tried procedures. Dr. Cumming comes forth with the warning in which he emphasizes the opinion of Dr. Frank Kidd, one of the most prominent British urologists, to the effect that the "canons of ordinary urography do not apply in the use of the uroselectan," for reasons which Dr. Cumming has expressed in his letter. In other words, the administration and interpretation of radiographs made after the intravenous use of uroselectan are a matter for the urologist rather than the roentgenologist. Results which are apt to be misleading may easily follow from misinterpretation on the part of any one who is not a more or less skilled urologist and familiar with the physiology of the urogenital tract.

METHUSELAH CITED AS HEALTH MODEL (*New York Times*)

In the course of his address before the British Medical Association, which met recently at Winnipeg, Dr. Robert Hutchison quoted the following poem, which he attributed to "The Southern Planters, U. S. A.," in support of the health practices of Methuselah:

Methuselah ate what he found on his plate
And never, as people do now,
Did he note the amount of the caloric count—
He ate it because it was chow.
He wasn't disturbed, as at dinner he sat,
Destroying a roast or a pie,
To think it was lacking in granular fat
Or a couple of vitamins shy.
He carefully chewed every species of food
Untroubled by worries or fears
Lest his health might be hurt by some fancy
dessert,
And he lived over nine hundred years!

HEROISM AND THE ADRENALS
(Manchester Guardian)

"When a man distinguishes himself in face of great danger or in a sudden crisis he is under the influence of a substance called adrenalin, which flowed from the adrenal gland into the blood. Heroes are simply people with enlarged adrenal glands. This adrenalin can be made in the laboratory by the distillation of coal tar."—Explanation given a class at a summer school session.

O let me like a soldier fall
In some tremendous fight!
I fear no foe or cannon ball
(Hi! are my glands all right?)
In slothful ease let cowards loll
While I on carnage sup.
(But kindly pass the adrenal
To get my dander up.)

My country, 'tis of thee I think,
My soul with ardour fills.
(One moment, Doctor, while I sink
Your latest dose of pills.)
Be mine the patriotic line,
The true heroic stuff!
(But, gosh! I hope that gland of mine
Is duly up to snuff.)

I do not care how fierce the threat,
Nor how forlorn the hope.
(That is, provided I can get
The right degree of dope.)
Now, let the butchery begin,
I shall not flinch or fly—
Ho! drench me with adrenalin
That I may do or die!

—LUCIO.

REDUCING THE COST OF ILLNESS
(Indiana State Medical Journal)

"Dr. William J. Mayo may have stirred up a hornet's nest, but he uttered a truth when he said that 'the cold fact remains that the cost of hospital care is prohibitive to the patient of moderate means, and that hospitals today are not designed primarily for the common man, or the poor man who is indeed fortunate when he occupies a free bed, but is in danger of finding a diminishing number of such beds available for his needs.' He also voiced another sentiment worthy of attention when he said that 'the financial burden of sickness on the common man, so far as hospital and nursing care is concerned, can be reduced greatly by properly planned and equipped hospitals, by introducing economical methods of caring for the patient, and by compelling the proper authorities to pay for the care of charity and poor patients unable to meet the expense. The municipal and county authorities should not spend their funds from the charitably minded, or add to the burden of the sick already over-taxed.' The latter observation is well worthy of serious consideration.

"Aside from the necessity of finding some means of furnishing hospital care at a price that is within the means of the man in moderate circumstances, there is an obligation on the part of medical men to adopt such procedures as will lighten the cost of sickness to the man of ordinary means. This can be done by avoiding hospitalization in a very large percentage of cases that now regularly go to a hospital but can and should be cared for in the average home. Many patients are sent to a hospital purely to add to the convenience of the attending physician who talks glibly about giving his patients the superior advantages of a hospital but who in reality is suiting his own convenience and catering

to a lazy habit of making it easier for himself by placing some of his responsibilities upon a hospital. It is quite true that among the poor the homes are not suited for illness, but in the average home fully seventy per cent of all illness, as stated by Billings, can be cared for just as well as in the hospital."



DR. B. R. CORBUS

The newly elected Chairman of the Council of the Michigan State Medical Society and Chairman at the complimentary dinner tendered Dr. C. B. Burr at Benton Harbor on the evening of September 16, 1930.

CHARACTER ANALYSIS COMPARED WITH
LOTTERY IN TEST

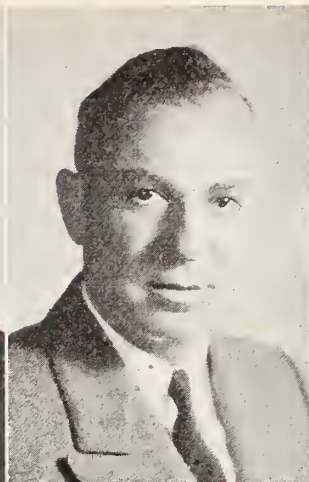
Character analysts who measure the skull by one of the latest systems of phrenology and who interpret their measurements to show the skull owner's special abilities have been tested and found wanting. A report of the test, in Personnel Research, indicates that any one who would like his abilities sized up might almost as well draw colored marbles, representing different degrees of ability, out of a box and set down his ability on each trait according to the marbles drawn in the lottery. This marble test was actually used by Adelbert Ford, of the University of Michigan, to determine how the character reading system in question compared with pure chance in its success at "hitting the nail on the head." The system proved a negligible shade more accurate than random chance. "The prevalence of large numbers of individuals and organizations aiming to sell systems of character analysis to employment departments justifies an occasional check of the value of such enterprises, and repeated warning to the psychologically untrained that these activities illustrate good salesmanship but poor science," Mr. Ford states.—*Science Service.*



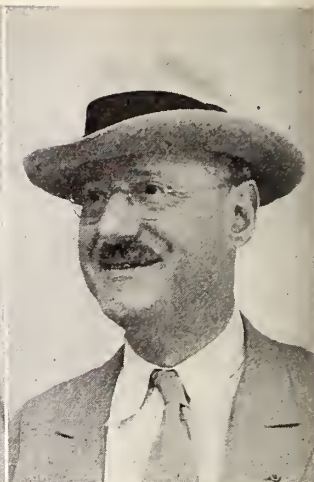
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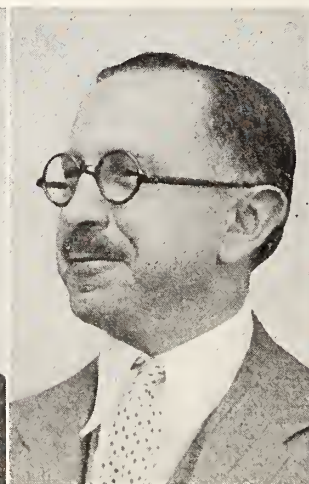
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ty Medical Society and
Chairman, Local Com-
mittee of Arrangements

Speaking of doctors' hobbies, Dr. Henry R. Carstens of Detroit has been an enthusiastic devotee of the camera since 1898. He has a new Leica Camera of which he is particularly proud. It accompanies him on all occasions. Dr. Carstens went hunting one afternoon during the annual meeting of the Michigan State Medical Society at Benton Harbor and this page is the result. Owing to a "back-fire" his own picture appears, at the request of the editor, over his protestations.

COMMUNICATIONS

CAUTION IN THE USE OF UROSELECTAN To the Editor:

Our recent correspondence in regard to intravenous urography has been clearly amplified by Frank Kidd, one of the most prominent London urologists, in the *Lancet* of July 19, 1930.

Calling attention to the marked variations in pelvic and ureteral outlines, as depicted upon X-ray films after the administration of uroselectan, in presumably normal subjects, he states that, due to what he terms normal dynamic variations, the pictures are very difficult to interpret, and mistakes easily made. The canons of ordinary urography do not apply. He suggests that the musculature of the pelvis may be in spasm or atony, at the time of an individual exposure, in each instance resulting in quite different records of the structural outline of the pelvis. So, also, the ureter may at one time or in one area suggest obstruction or dilatation, and only a portion of the ureter may be visualized, all due to peristaltic activity, but giving rise to many faulty opinions, unless the one who interprets the films is quite familiar with these varying phenomena. Kidd claims that what appears to be a real dilatation may be simply a temporary atony.

According to this author the gravest error likely to result from faulty interpretation of uroselectan photographs, lies in the difficulty of distinguishing a tumor of the kidney from a kidney temporarily out of commission due to inflammation, it being most necessary to consider all features of a given case in the reading of each film. He further declares that such diagnostic work can be done only by men long trained in the clinical application of all the diagnostic methods available in the practice of urology, and that the provision of sound advice relative to treatment and prognosis, is even more important than a supposedly accurate diagnosis.

Mr. Kidd has been using Uroselectan since December, 1929, and has published other articles recounting his experience with this drug and intravenous urography. It is to be hoped that his timely advice relative to the pitfalls and overenthusiasm likely to develop as a result of too general application of the method, may be well taken.

ROBERT E. CUMMING.

A WORD FOR HIS SUCCESSORS

Grandville, Michigan,
September 29, 1930.

To the Editor:

The old saying, "If I had it to do over again I would do it a little different," applies to me so far as the general meeting of our last annual meeting is concerned.

I regret exceedingly, that since there was no second general meeting held on Wednesday, although the By-laws provide for it, and it was so announced on the official program, I did not give the President and President-elect a proper introduction into office. I purposely withheld it on Tuesday thinking that I would have the opportunity to do so on Wednesday. The slip-up came about, I presume, through the change in the Constitution which now provides for the nomination and election of the President by the House of Delegates. Had I known that the second general meeting was to be called off, I would have been only too glad to perform that function at the first meeting.

Our new President, Dr. Ray C. Stone, really needs no introduction—everybody knows him as a hard conscientious worker and a straight shooter. For

ten years he has given his best efforts and donated much time as member of the Council to foster the interests of the State Society. As chairman of the Council, from my observation of him during the past year, he has exhibited the necessary executive ability a President should possess. And because of his knowledge of our needs, I predict a very successful year for our Society.

President-elect Carl F. Moll is of much the same caliber as Dr. Stone. I have known Dr. Moll intimately for many years and from my association with him as delegate to the A. M. A. have found him to be the type of man in whom one has confidence and in whom we repose respect. He is made of the timber which every honorable doctor would like to have placed in the foundation of their organization. As President he will honor us in every need. We may say that so far as chief executives go, we are sitting pretty for the next two years.

As Past President, I have enjoyed my incumbency and have greatly appreciated the honor. In the words of Past President C. G. Darling, uttered at Mount Clemens in his presidential address, I would say as he did, that "I would rather be President of the Michigan State Medical Society than President of the United States." I have been honored beyond measure by my professional brethren, not the least of which was my recent unanimous re-election as delegate to the A. M. A. For all of which I am humbly and deeply grateful and express herewith my thanks from the bottom of my heart. And although I am now a "Past," I hope to continue in the future to do my bit for organized Medicine in Michigan.

J. D. BROOK.

TO IMPROVE OBSTETRICS

To the Editor:

Complying with your request* to write you setting forth some facts regarding the American Association of Obstetricians, Gynecologists and Abdominal Surgeons Foundation, Incorporated. The following may answer your purpose.

This society has been a national group of representative medical men for forty-four years. Last year a non-profit sharing incorporation was effected under the laws of the State of Michigan. The constitution and by-laws were ably and carefully formulated by the late Judge Victor C. Lane of the University of Michigan, enabling the administration and collection of a fund to be held in perpetuity for the purposes as stated in its constitution. It was provided that the earnings therefrom were to be disbursed for the fulfillment of humanitarian purposes, foremost of which is the education of the public as to the need for race betterment as it pertains to childbirth. The compelling need of this work is indicated by authoritative vital statistics which show United States has the highest infant mortality among twenty-three of the leading countries of the world. It has been authoritatively stated that 20 per cent of all cripples may attribute the causes of the deformities to accidents of childbirth.

Stockard, Streeter and others affirm that early pathological causes (often preventable) of injury to the germ plasma and fertilized ovum are the greatest causes of congenital deformities. The distinguished work of Ballantyne of Edinburgh, an honorary member of this Society, upon antenatal pathology laid the foundation for the far-reaching work of conservation of antenatal and postnatal

*This letter has been written at the request of the Journal of the Michigan State Medical Society. The president, secretary and other members of the Foundation, including Dr. G. Van Amber Brown, Dr. J. E. Davis of Detroit and Dr. A. M. Campbell of Grand Rapids, are members of the Michigan State Medical Society.

child life. Not only was this the means of reducing the infantile death rate, but morbidity has been tremendously lowered.

The plans of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons Foundation, Incorporated, call for raising an endowment of \$100,000.00 which is to be held in perpetuity as a principal sum and only the interest earned shall be applied yearly for the purposes above mentioned. The association work is contributed without remuneration and the members have already personally subscribed \$15,710 and paid in cash \$10,335, thus proving a prompt and substantial interest in this endeavor.

Our last annual meeting was held at Niagara Falls, Canada, September 13 to 17. In short, the chief objective of the organization is gathering, promotion and dissemination of theoretical and practical knowledge upon the subjects of obstetrics, gynecology and abdominal surgery, their allied and kindred subjects.

G. VAN AMBER BROWN, M.D.

THE FREE CLINIC

October 17, 1930.

Editor of the Michigan State Medical Journal: In the October issue of the Journal of the Michigan State Medical Society, your commendation* of the clinic committee's recommendation for solution of the clinic problem was received with great pleasure by every member of the committee.

On the cover of the same issue our past president, Dr. J. D. Brook, gives a concise picture of the free clinic problem. He closes with this statement, "It follows, therefore, that free clinics and social agencies are undermining the spirit of true Americanism and are breeding socialistic tendencies."

Dr. William Gerry Morgan, president of the American Medical Association, hit the nail on the head in his address to the House of Delegates last June.

"The basic principles are:

"1. The physician is no more obligated to provide for the care of the indigent sick than his fellow citizen.

"2. In mutual charitable undertakings for the care of the sick, each citizen contributes what he has; the layman, physical necessities; the physician, professional skill. But each has a right to protect himself from exploitation and to judge of the merit of the recipients of his bounty.

"3. When a hospital offers its facilities to a mixed clientele, pay, part pay and pauper, the distinction between the sources of those facilities should be clearly recognized. The physical equipment and service is of general public origin, and their uses may be sold or given away in the discretion of lay boards; but the professional facilities are, and always must be, the contribution of the medical staff as individuals and cannot become in any sense the property of the institution.

"4. When a hospital is owned and operated by the government and supported by taxation, to which the medical profession contributes its due proportion, medical attendance should be paid for by taxation, along with all the other facilities supplied by the institution.

"5. No hospital, instituted and supported by public philanthropy or community co-operation of any kind, should be permitted to increase its revenues and so

*Dr. Leithauser was chairman of the committee of the Wayne County Medical Society. The communication refers to the editorial comment on the committee's report which was published in the Wayne County Medical Bulletin in July last.

reduce its financial burden on the public, by any system of collection fees for medical attendance, and thus engaging in the corporate practice of medicine.

"6. The membership of the Association should be guided by these principles in accepting posts on the staffs of hospitals, and should refuse to support by the contribution of their services, or by the references of their patients, any institution violating them."

The entire medical profession is in an uproar on this subject and something can be done about it if the leaders in the profession make an earnest effort. Since the free clinic is at the base of all socialized medicine many other evils could be corrected, if the profession would supervise the admission to free clinics as suggested through an investigation bureau as proposed in Wayne County. With your aid we may arouse more interest in this matter.

Thanking you, I remain

Sincerely yours,

D. J. LEITHAUSER, M.D.

DEATHS

DR. LEO DRETZKA

The many friends and acquaintances of Dr. Leo Dretzka were shocked to hear of his death on October 12, after a very brief illness of only five days from streptococcal infection. While riding horseback a week previous to his death, Dr. Dretzka received an abrasion on the side from a belt. This was the source of the infection. He was born in Germany 42 years ago. He came early to the United States and received his academic training at Marquette Academy, Milwaukee, and later at Marquette University, from which institution he graduated. Dr. Dretzka had made a number of visits to Europe since his graduation for post-graduate study. He was achieving a reputation as professional traveler or globe trotter. Two years ago the Journal of the Michigan State Medical Society published a very interesting paper from Dr. Dretzka giving an account of his travels in Russia. A year ago he spent the summer in Spain. In 1915 he was resident and chief surgeon of the Receiving Hospital, Detroit, and a year later he was appointed by Mayor Marx to the position of superintendent of the hospital, which position he occupied at the time of the World War. He enlisted in the medical corps at the time and served a hospital unit of the American Expeditionary Forces in France, where Dr. Dretzka had considerable experience in brain surgery. He returned to Detroit in 1919, when he resumed private practice and became attending surgeon at Receiving Hospital as well as associate professor of surgery at the Detroit College of Medicine. Dr. Dretzka was the author of a number of surgical papers which were noted for their very careful preparation. He was a member of the Michigan State Board of Health, Wayne County Medical Society, Michigan State and American Medical Associations and also of the Detroit Academy of Surgery. At the time of his death he had completed a work for publication entitled "Acute Trauma of the Abdomen." The work is complete and in typewritten form with extensive illustrations. Dr. Dretzka delayed its publication with an eye to the necessary author's pruning to which every manuscript for publication should be subjected. Dr. Dretzka is survived by his widow, who under her stage name, Doris Moore, at one time played the leading rôle in *Peg O' My Heart*, one adopted son, Danny, aged five, and his father and mother.

GENERAL NEWS AND ANNOUNCEMENTS

Dr. and Mrs. Walter Hackett of Detroit have left for a fall vacation in London, England.

Dr. W. Andrew Bunten has moved his offices to 866 Fisher Building, Detroit, where he will continue to practice neuro-surgery and neuro-surgical diagnosis.

The total enrollment of students of the Detroit College of Medicine for the current year is 359, which is 31 in excess of the number for last year. The Freshman class numbers 88.

Drs. W. A. Evans and Lawrence Reynolds were re-elected Treasurer and Editor respectively at the West Baden, Indiana, meeting (September 25, 1930), American Roentgen-Ray Society.

Dr. James Inches of Detroit drew a full house September 30 when he gave an illustrated lecture before the Wayne County Medical Society on his experiences in big game hunting in Africa.

Dr. Bernhard Friedlaender of Detroit attended the Congress of Surgeons, October 13-16, in Philadelphia, where he delivered a paper on a new intravenous anesthetic, "Pernocton," in the department of anesthesia.

Dr. Frank L. McPhail of Highland Park was abducted in connection with an attempt to obtain \$10,000.00. His rescue was effected after a number of hours. The abduction followed the response to a fake professional call.

The delay in the appearance of this Journal October 1 and November 1 was due to the turmoil incident to moving the printing plant. This is the explanation of the lapse from the usual promptness in getting the Journal out.

Dr. Angus McLean of Detroit has received an invitation from the President of the United States to attend the Conference on Child Health and Protection which has been called to meet in the City of Washington November 19 to 22.

At the autumn convocation of the Medical School of the University of Michigan Dr. Richard Freyberg, a graduate of June, 1930, was awarded the Sternberg medal given to the student displaying marked ability in the study of preventive medicine.

Dr. Walter J. Cree of Detroit spent September 25, 26 and 27 in Washington attending the annual meeting of the Association of Military Surgeons. While in Washington he visited the Walter Reid Hospital and the annual Military Tournament at the Washington barracks.

According to the Bulletin of the Calhoun County Medical Society, Dr. R. C. Stone is the fourth president of the Michigan State Medical Society to be elected from Calhoun County. The other three were Dr. Edward Cox, 1878; Dr. S. F. French, 1888; and Dr. H. W. Alvoord, 1899.

This number of the Journal of the Michigan State Medical Society contains two splendid reviews of the first volume of the Medical History of Michigan, one by the Journal of the American Medical Association and the other by Dr. Francis R. Packard, medical historian in the American Journal of Surgery. Both reviewed the work at length in the September number.

Attention is called to three very important clinical programs in this number of the Journal namely, The Pediatric Clinic at the University of Michigan Hospital November 14 and 15; The Fifth Annual Clinic of the Highland Park Physicians Club on December 4, and a Clinical Conference on Communicable Diseases given at the Herman Kiefer Hospital, Detroit, on Wednesday of each week at 10 A. M.

The entrance requirements for the University of Michigan medical school have been advanced to include nearly a year extra of preparatory work. Candidates for the degree of M.D. will require to take ninety instead of seventy hours of preparatory work. It is announced that the year will be divided into three equal portions in order to insure all sections an equal length of time in the various laboratory courses.

Detroit has the highest death rate for diphtheria of all large cities in the country according to the commissioner of health. The advisability of bringing charges of criminal neglect against parents who fail to give children the proper care and attention was discussed following the admission of three moribund children to the Herman Kiefer Hospital. One of the children fell sick on September 13 and a physician was not called until October 2.

The new History of Wayne County and the City of Detroit, Michigan, by Clarence M. Burton and Messrs. H. T. O. Blue and Gordon K. Miller, has just been published in four volumes. The work comprises a complete history of all phases of professional, industrial and commercial activities. Chapter XVIII, entitled "The Medical Profession of Wayne County," was written by Dr. J. H. Dempster. —Wayne County Medical Bulletin.

As this Journal goes to press word has been received of the death of Dr. P. M. Hickey, long a resident of Detroit, who for the past ten years has held the position of Professor of Roentgenology at the University of Michigan. Dr. Hickey died on October 30 of cardio-renal disease. The funeral took place in Detroit on Sunday afternoon, November 2. An account of Dr. Hickey's life and professional career will appear in the December number of this Journal.

Mayor (Dr.) L. A. Farnham of Pontiac, Michigan, who was also a member of the City commission of Pontiac, has tendered his resignation as member of the commission. Commenting on Dr. Farnham's resignation the Pontiac Daily Press says: "In the resignation of Dr. L. A. Farnham as city commissioner and mayor, Pontiac is losing a valuable public official who has given unsparingly of his time and money to the cause of the community at large. Certainly Dr. Farnham has discharged his community obligation and the city is fortunate to have had him as one of the commissioners during the period of expansion and development that Pontiac has witnessed in the last five or six years."

CLINICAL CONFERENCE ON COMMUNICABLE DISEASES

The Public Health Committee of the Wayne County Medical Society inaugurated last year a series of Clinical conferences on the acute communicable diseases. Practical problems in diagnosis and treatment were presented by means of case histories and the demonstration of patients. All physicians of Wayne County were invited to attend.

A second series of clinics will be offered this year, beginning October 29, at 10 A. M. and continuing each Wednesday thereafter. The conferences will be held in the auditorium of the Herman Kiefer Hospital of Detroit by Dr. J. E. Gordon,

Medical Director of the Division of Communicable Diseases. The Detroit Department of Health and the Wayne County Medical Society are in agreement on a policy of stimulating increased interest of the private physician in the methods and practice of preventive medicine. These clinics will deal with practical rather than theoretical considerations, and will include methods of both curative and preventive medicine.

The attendance last year was considerably larger than the committee had anticipated. With a larger auditorium available and in response to numerous requests, the committee has found it possible to enlarge this activity to include physicians of nearby communities. A cordial invitation is extended to all physicians of Michigan, and particularly those in the southeastern part of the state, to attend these post-graduate clinical conferences on communicable diseases.

FIFTH ANNUAL CLINIC OF THE HIGHLAND PARK PHYSICIANS CLUB

Time: December 4, 1930. All Day

Place: Highland Park General Hospital and Nurses' Home

The members of the Highland Park Physicians Club extend an open invitation to attend the Fifth Annual Clinic on December fourth. A new feature this year is the decision of the members' wives to entertain the visiting physicians' wives.

Many doctors know, from past attendance, what this clinic is; but for those who have been unable to be present in the past it has been said that this is one of the finest one-day medical clinics in North America.

Mrs. C. C. Vardon is General Chairman of the Women's Committees. Entertainment plans for the ladies include sight-seeing in Henry Ford's old-time American Greenwich Village, the Ford Airport, luncheon at the Dearborn Country Club and the evening with the doctors at the banquet.

Mrs. E. J. Minor and Mrs. C. J. Barone are sub-chairmen of the committees. Mrs. W. L. Hulse is in charge of luncheon tickets. Transportation is under the direction of Mrs. Don Cohoe, while Mrs. Frank Witter and Mrs. Friedlander are in charge of the Hostess Committee. Luncheon will be under the supervision of Mrs. G. Van Amber Brown.

The scientific program includes the following speakers:

Dr. Charles Stanley White, F.A.C.S., Professor of Surgery, George Washington University Medical School, and Chief of the Department of Surgery, Gallinger Municipal Hospital, Washington, D. C.

"One Year's Experience with Avertin." Illustrated with the cinema.

Dr. Philip A. Jacobs, Chief in the Department of Urology, Mt. Sinai Hospital, Cleveland, Ohio.

"Backache, an Urologic Problem." Illustrated with lantern slides.

Dr. Dean DeWitt Lewis, F.A.C.S., Professor of Surgery, Johns Hopkins University School of Medicine, Baltimore, Md.

Subject to be announced later.

Dr. Perry G. Goldsmith, F.A.C.S., Head of Department of Oto-Laryngology, Toronto University, Toronto, Ontario, Canada.

"The Management of Common Ailments of the Ear, Nose and Throat in General Practice."

Dr. Allen J. McLaughlin, United States Public Health Service, Chicago, Ill.

"The Relation of Public Health to the General Practitioner."

Dr. Max Minor Peet, F.A.C.S., Professor of Neurosurgery, University of Michigan Medical School, Ann Arbor, Michigan.

"Surgery of the Sympathetic Nervous System."

Dr. Charles Hugh Neilson, F.A.C.P., Associate Dean and Professor of Internal Medicine, St. Louis University School of Medicine.

Subject to be announced later.

Dr. Samuel Wyllis Bandler, F.A.C.S., New York, N. Y.

"Medical Gynecology."

Dr. Carl Henry Davis, F.A.C.S., Milwaukee, Wisconsin.

"Surgical Gynecology."

Dr. Edward Albert Strecker, Professor of Nervous and Mental Diseases, Jefferson Medical College, "Neuropsychiatry."

Dr. Alan Brown, Pediatrician of the Toronto Sick Children's Hospital and on the staff of the University of Toronto.

Subject to be announced later.

Dinner at 6:30 P. M. and an after dinner program has been arranged for the medical men and their wives. The chief speaker is of national repute and appears in this role for the initial time. Remember the date and come prepared to spend a profitable and pleasant day.

PEDIATRIC CLINIC AT UNIVERSITY HOSPITAL NOVEMBER 14 AND 15

The University of Michigan Pediatric and Infectious Disease Society will present a clinic on November 14 and 15 at the University Hospital, Ann Arbor.

The program which will be presented is as follows: Friday afternoon, November 14, 2:00 o'clock, Open Forum; Abdominal Pain, Discussion opened by Dr. William D. Lyon and Dr. Thomas D. Gordon; Nutritional Anemias, Discussion opened by Dr. Luvern Hays and Dr. Raphael Isaacs (by invitation); Mental Hygiene, Discussion opened by Dr. Theophile Raphael (by invitation), Dr. Robert Dieterle (by invitation), Prof. Willard C. Olson (by invitation), Dr. Louis Schwartz (by invitation).

Friday evening, November 14, 7:30 o'clock, Order of Business; Meeting called to order by the President; Reading of Minutes. Election of Officers for ensuing year—President, Vice-President and Secretary. (1) Fat Tolerance as a Factor in Malnutrition, Dr. William D. Lyon, Akron, Ohio; (2) The Role of Protein in the Treatment of Diarrhea, Dr. Paul B. Kreitz, Ann Arbor; (3) Congenital Intestinal Obstruction, Dr. Thomas D. Gordon, Grand Rapids, and Dr. A. W. Hill, Grand Rapids (by invitation); (4) Title to be announced, Dr. Leon De Vel, Grand Rapids; (5) Creatin Metabolism in Progressive Muscular Dystrophy, Miss Catherine Magee, Ann Arbor (by invitation); (6) Treatment of Edema in Tubular Nephritis, Dr. William S. O'Donnell, Detroit; (7) Classification of Nephritis in Children, Dr. Samuel Levin, Detroit; (8) Tests of Kidney Function, Dr. F. H. Lashmet, Ann Arbor (by invitation); (9) Cyanosis, Dr. A. R. Turner, Ann Arbor.

Saturday morning, November 15, 9:00 o'clock. (1) Chorea, Dr. R. W. Waggoner, Ann Arbor (by invitation); (2) Lipoid Substances as Antigens, Dr. W. W. Redfern, Coldwater (by invitation); B.C.G. Dr. Daniel Budson, Ann Arbor; Discussion opened by Dr. Malcolm Soule, Ann Arbor; (4) Panthoanatomical Study of T. B. in Children, Dr. Frank Van Schoick, Jackson; (5) Agglutination Reactions, Dr. Malcolm Soule, Ann Arbor (by invitation); (6) Circulatory Failure in Diphtheria, Dr. John E. Gordon, Detroit (by invitation); Discussion opened by Dr. Chas. W. Edmunds, Ann Arbor; (7) The Role of the Reticulo-endothelial System in Immunity, Dr. D. Murray Cowie, Ann Arbor, Mich.

Official Minutes---110th Annual Meeting, Michigan State Medical Society---Benton Harbor, Mich., Sept. 15, 16, 17, 1930

OFFICIAL MINUTES HOUSE OF DELEGATES

MONDAY MORNING SESSION
September 15, 1930

The meeting of the House of Delegates of the Michigan State Medical Society, held in the Ballroom of the Hotel Whitcomb, St. Joseph, Michigan, convened at ten-thirty o'clock, Dr. H. J. Pyle, Grand Rapids, Speaker, presiding.

Speaker Pyle: The meeting will please come to order. We will now listen to the roll call.

Secretary Warnshuis: I hold in my hand a majority of the House of Delegates who have signed the first roll call. I move that this constitute the official roll call of the House for this morning's session.

Dr. C. K. Hasley (Detroit): I move the list be read.

The motion was seconded and carried.

Following is the roll call as signed for the morning session:

Alpena County: E. L. Foley, Alpena.
Bay-Arenac-Iosco: H. P. Lawrence, Bay City.
Berrien County: W. C. Ellet, Benton Harbor.
Branch County: A. G. Holbrook, Coldwater.
Calhoun County: C. S. Gorsline, Battle Creek; George Hafford, Albion.
Cass County: W. C. McCutcheon, Cassopolis.
Genesee County: John T. Connell, Flint; G. J. Curry, Flint; Mark S. Knapp, Genesee, Flint.
Gogebic County: W. E. Tew, Bessemer.
Grand Traverse-Leelanau: E. F. Sladeb.
Ingham County: L. G. Christian, Lansing; E. J. McIntyre, Lansing.
Jackson County: J. J. O'Meara, Jackson; Philip Riley, Jackson.
Kalamazoo-Van Buren-Allegan: F. T. Andrews, Kalamazoo; F. C. Penoyer, South Haven.
Kent County: R. G. Denham, Grand Rapids; A. J. Moll, Kent, Grand Rapids; W. E. Wilson, Grand Rapids.
Luce County: H. E. Perry.
Macomb County: J. E. Curlett, Roseville.
Manistee County: A. A. McKay, Manistee.
Marquette-Alger: V. H. Vandeventer, Ishpeming.
Mason County: L. W. Switzer, Ludington.
Mecosta-Osceola: T. P. Treynor, Big Rapids.
Monroe County: S. J. Rubley, Monroe.
Muskegon County: F. W. Garber, Muskegon.
Oakland County: C. T. Eklund, Pontiac; F. A. Mercer, Pontiac.
O-M-C-O-R-O: C. R. Keyport, Grayling.
Shiawassee County: Archer M. Hume.
St. Joseph County: Charles Morris, Three Rivers.
Washtenaw County: J. A. Wessinger, Ann Arbor.
Wayne County: A. U. Axelson, Detroit; Charles J. Barone, Detroit; Clarence L. Candler, Detroit; J. L. Chester, Detroit; Norman E. Clarke, Detroit; Basil L. Connelly, Detroit; J. D. Curtis, Detroit; B. U. Estabrook, Detroit; H. B. Garner, Detroit; L. O. Geib, Detroit; C. K. Hasley, Detroit; L. T. Henderson, Detroit; A. J. Himmelhoch, Detroit; L. J. Hirschman, Detroit; F. J. Kilroy, Detroit; Charles Lakoff, Detroit; H. A. Luce, Detroit; R. M. McKean, Detroit; G. C. Penberthy, Detroit; Jacob R. Rupp, Detroit.
J. D. Brook, President.

Dr. Perry's (Luce County) right to sit as a member of the House of Delegates was questioned by Wayne County delegates.

Speaker Pyle: The question has been raised as to the right of Dr. Perry to sit in

the House of Delegates. What have you to say on that Dr. Penoyer?

Dr. F. C. Penoyer (South Haven: Dr. Perry was not elected as either delegate or alternate but he comes as properly accredited from the County Secretary.

Dr. Hasley: Article V, Section 2, says that any county is entitled to "send one delegate if its annual report has been made as provided in the By-Laws of this Society."

Has that report been made?

Secretary Warnshuis: Yes. I may say for the information of the House that each County Secretary makes a monthly report to the state secretary as to the number of members that they have in their Society and those who have paid their dues during the current month, those who may have moved away, or those who may have died. That has been considered by the Council as constituting the report.

Dr. Hasley: Have all of the counties done that?

Secretary Warnshuis: Yes. That is the only way that we can keep our finances in order.

Dr. A. M. Hume's (Shiawassee County) right to sit in the House of Delegates was questioned by Wayne County delegates.

Dr. A. M. Hume (Shiawassee): I was elected by the Society at a regular meeting.

Speaker Pyle: Our Secretary has moved that this constitute the roll call of the House. Are there any objections to that being done?

The motion was seconded, put to vote and carried.

Speaker Pyle: We will now listen to the report of the Credentials Committee. Dr. Penoyer.

Dr. Penoyer: Mr. Speaker and House of Delegates: There are 56 properly accredited delegates and alternates to the Michigan State Medical Society. Proper credentials have been presented and proper registration has been made.

I move that these delegates be seated.

The motion was seconded.

Dr. A. J. Himmelhoch (Detroit): Does that include those who are not properly elected delegates or alternates? I do not believe there are 56 who are properly elected

delegates and alternates. I think there are some substitutions.

Speaker Pyle: Will you state who they are?

Dr. Himmelhoch: Hume, Callery and Perry.

Dr. Hume (Shiawassee): I stated very plainly that I was elected a delegate at a meeting of the Shiawassee County Medical Society held last Thursday to take the place of Dr. Weinkauff.

Dr. Himmelhoch: I bring this matter to your attention because I think the Constitution requires that the names be submitted previously. At least that has been the feeling in our delegation that no substitutions will be permitted.

Dr. Hasley: I will move that those names be substituted for the ones given in the printed list and they be allowed the privilege of the floor.

The motion was seconded by Dr. McIntyre (Lansing), put to a vote and carried.

Dr. Charles E. Dutchess (Detroit): Dr. Treynor, who is a duly elected alternate of Mecosta County has just arrived. I move that his name be added and that he be properly seated.

Dr. Connelly (Detroit) seconded the motion, which was put to a vote and carried.

Dr. Charles J. Barone (Detroit): What is the object of seating this gentleman? Has he been elected a delegate by the County Society?

Dr. Dutchess: Dr. Treynor was elected an alternate of that county.

Dr. Barone: I would like to avoid anything further of this nature from now on. I would like to make a motion that this session of the House of Delegates seat no other person as a Delegate unless they have been certified according to the list that we have. Those that we have taken care of previously are all right but in the future we take no others outside of those in the list.

Speaker Pyle: It is the right of the assembly to rule out anyone not properly elected.

Dr. J. D. Curtis (Detroit): I want to second Dr. Barone's motion.

Dr. A. H. Whitaker (Detroit): I would like to amend that motion to read that with the exception of one man who is now signing as a substitute delegate at the present time.

Dr. A. V. Wenger (Grand Rapids): Do I understand that is at this present session, or at all of them?

Speaker Pyle: At the present session. That is the way Dr. Barone put it.

Dr. L. J. Hirschman (Detroit): I understood Dr. Barone to state that it was according to the list that we have printed. I notice several counties have not reported their delegates' names as yet so that the names are not printed in the list. I think it would be unfair for this organization to deprive any county of its proper representation because a name doesn't happen to be printed in the list. I think that motion should not prevail.

President Brook: It is perfectly proper to not seat any delegate who is not properly certified to. This motion is evidently a blanket motion, which is manifestly unfair to individual members who should be seated as delegates. I think that each instance should be considered separately. Sometimes there are extenuating circumstances which would govern a case. I think this motion should not prevail.

Dr. Curtis: I will withdraw my second to that motion.

Dr. C. L. Candler (Detroit): I will make a substitute for that motion.

I make a motion that any substitute delegates be brought before this House for endorsement before they are seated.

Dr. Wenger: I will second that motion.

Speaker Pyle: That is necessary anyway, that the substitute delegate be brought before the House before he can be seated, but we will entertain the substitute if you wish it.

The motion was put to a vote and was carried.

With the consent of the House of Delegates Dr. Kilroy (Wayne), Dr. Sladek (Grand Traverse-Leelanau), Dr. McKay (Manistee) were seated.

Dr. J. L. Chester (Detroit): I move we seat Dr. George Seip of Wayne County as a delegate.

Dr. Himmelhoch: I second the motion.

Dr. Hume: Is he an accredited delegate?

Dr. Chester: No.

Speaker Pyle: If he is not an accredited delegate I do not see how he can be seated.

Dr. Chester: I understood that the House had the right to seat a man like that.

Speaker Pyle: The chair couldn't rule that way.

Dr. Himmelhoch: Could we have the Secretary read the Constitutional requirements for the seating of a delegate in the House of Delegates so that this could be settled once and for all?

Speaker Pyle: We will ask the Secretary to read that part of the Constitution.

Secretary Warnshuis read Article V of the Constitution, with reference to the House of Delegates.

Dr. Himmelhoch: There is nothing stated about the list having to be submitted as to who the accredited delegates are.

Secretary Warnshuis: "... shall be entitled to send one delegate, if its annual report has been made as provided in the By-Laws of this Society."

The annual report, as I stated, is a monthly report that the Secretary of each county society renders to the Secretary of the State Society. That has been considered, by the Council, as being the annual report of each county unit. These lists of delegates have been sent in by the Secretaries. Those counties that have no names have failed to elect them at the time the report was made.

In Shiawassee County they didn't have their meeting until last week, at which time they elected Dr. Hume. Some of the county societies elect their delegate a week or two weeks before the state meeting because at that time they know what men are likely to go and what not.

Dr. Himmelhoch: Is there an annual report for those counties?

Secretary Warnshuis: That is the monthly report of which I receive 12 each year. The certification of Dr. Hume's election as delegate has been handed to Dr. Penoyer.

Dr. Himmelhoch: Then Dr. Seip of Wayne does not meet the requirements of the constitution.

Dr. Hume: I would move that this be referred to the Committee on Credentials and they can report on it as they see fit.

Dr. Perry (Luce): I second that motion.

Dr. Chester: In that case I will withdraw my motion.

Speaker Pyle: It has been moved and seconded that this particular case be referred to the Credentials Committee.

Dr. Curtis: Dr. Chester has withdrawn his motion and I do not see why you should refer the matter to the Credentials Committee.

Speaker Pyle: I did not think that the motions were identical.

Dr. Curtis: But Dr. Chester withdrew the name.

Dr. Hume: I will withdraw my motion. . . . Dr. Dutchess, Vice Speaker, assumed the chair . . .

Vice Speaker Dutchess: The next order of business is the report, or address, of the Speaker.

SPEAKER'S ADDRESS

Gentlemen:

Again, I have the honor of holding in my hand an article made from the copper of our great northern peninsula, the gavel of the Speaker of the House of Delegates of the Michigan State Medical Society. When I read the list of delegates in our last State Journal, I was delighted to see the names of so many men who were present at last year's meeting at Jackson. I could readily see that today's meeting would be very interesting.

I do not believe that the making of speeches is your Speaker's prerogative. As our order of business calls for a Speaker's address, I am tendering these remarks. When one reads the different addresses of the leaders of our profession, one cannot help noticing the fact that the problems of medical economics are coming to the foreground. The profession has talked much and has done little in combating the many factors which have encroached on the rights of the individual medical man. I still maintain that any man who graduates from high school and then has seven years of expensive training to go through before he can receive the title Doctor of Medicine, should not be faced with conditions as they are today. Many of our number, particularly in our urban centers, have seen the wolf come nearer the door in spite of past training and conscientious effort in healing the sick. It is truly remarkable that the large number of younger members have hewed so straight to the line and are not tempted to engage in methods that might be considered unethical. Truly, this is a noble profession.

Social Welfare Agencies, Free Clinics, closed hospital staffs, Veterans' Hospitals, adverse legislation and State medicine, still

in embryo, are subjects that might well be discussed in this assembly. The sclerosed scientist dislikes the mention of these things in our meetings. His sage advice is to do better work. It is the function of our scientific sections to teach us to do better work, but I believe it is a function of the House of Delegates to bring medical economics into the open.

The thousands of physicians of this commonwealth should receive every consideration from our law makers at Lansing. Any attempt to place the Doctor of Medicine on a level with the cults is preposterous. Possibly the blame lies within our own ranks. We have not made the contacts with our legislators as we should have done. The thought has come to me that it would have been a splendid move had this State meeting been held a week before the primary election, so that we could have invited our leaders in State politics. Recently I attended a dinner given by a group of medical men in Wayne county and I was agreeably surprised to see the large number of State representatives, senators, judges and newspaper men present. As chairman of the Kent county legislative committee, I hope to be instrumental in having meetings of this kind in Grand Rapids. I think this should be done in all our County societies. If any member wishes to know how to go about this, let him ask the men from Wayne. I believe that our State representatives and senators are honest men, and if they were made to see that our motives are altruistic, we, as well as the public, would benefit. Each county, no doubt, has its own problems and if organized medicine is to mean anything, we should help each other in a fraternal spirit.

We have come to the beautiful twin cities of Michigan—communities that are judged by the fruits they produce. This assembly might take this fact as a slogan. Surely, we shall be judged by what we produce. I trust that our deliberations will result in some constructive work.

Today we have to consider the revision of our Constitution and By Laws. I trust that any changes that are made will be the result of proper deliberation and that you may be able to cast personal prejudices aside and keep in mind the future of our profession and the interests of the public health welfare.

As your presiding officer, I trust that you will be as patient with me in these sessions as you have been in the past.

Vice Speaker Dutches: The Speaker's address will be referred to the Business Committee.

Speaker Pyle resumed the chair.

Speaker Pyle: We will now listen to our President's address. Dr. Brook. (Applause.)

PRESIDENT'S ADDRESS

Mr. Speaker, and Members of the House of Delegates:

Again in 1930 we are assembled as a House of Delegates. Our thoughts and our deliberations will determine our actions. Yet one, who has been with us for many years as delegate, president and State Commissioner of Health, whose advice and counsel were sound, whose presence was a stimulation, whose leadership was unquestioned, is not here, Guy Lincoln Kiefer is absent.

May I ask that, for this outstanding personage, for his achievements and accomplishments, we stand and bow our heads for a moment in silent reverence, to the memory of this true friend of the doctor.

Being well aware that this meeting of the house has before it more than the ordinary routine of business, I shall be as concise and brief as possible. There are, however, four or five subjects which I consider of sufficient importance to bring to your attention, and upon some of which I believe you should take definite action.

1. One year ago you appointed a committee to revise our constitution to meet perhaps some desirable changes deemed necessary. Six years ago at the Mt. Clemens session occurred our last constitutional revision under which we are now working. Then, as now, a committee was appointed to revise and it spent a considerable time doing a good job and the revised form was published in the Journal for your perusal. At the session of the house for its consideration there were introduced by the chairman of the Council numerous substitutes containing many radical changes for the report of the committee of which Dr. Manwaring of Flint was chairman. Almost every one of the substitutes was adopted for better or for worse *without* due consideration or thought on the part of the House of Delegates. The point I wish to make is that no

changes or substitutions for the committee report should be made without ample deliberation and discussion thereon by the members of this house.

2. At the Bay City meeting the office of Speaker of the House was created for the purpose of expediting its deliberations. Previously the president had presided but many of these officials, never having been members of the house, were utterly unfamiliar with its procedure and many times knew little about the constitution or parliamentary practice resulting in much confusion, annoyance and waste of time. The custom since creating the office of speaker until the past two years has been to pass it around as a political plum irrespective of the incumbent's ability as a presiding officer or parliamentarian and thus destroying the purpose for which the office was created. A good speaker familiarizes himself with Robert's Rules of Order and with the constitution, and should be able to make fair and unprejudiced decisions and at all times have the meeting under control. The oftener a speaker presides the more valuable he becomes, and from my experience in the House of Delegates of the American Medical Association, I would recommend that you follow the example of our parent association and re-elect your speaker annually irrespective of geographical location or politics.

3. The State Board of Registration in Medicine has found that occasionally a regular graduate in medicine is practicing without being properly registered in his county, along with some other physicians with questionable reputations who are practicing under cover. There is no method at present of knowing how many active practitioners there are in the state, but a required annual registration of all physicians would undoubtedly bring to light some questionable characters who now go unmolested. The nuisance of an annual registration to most of us, along with a per capita stipend of from \$1.00 to \$75.00, must be considered, as well as the object of the tax and the method and purposes of its expenditure.

4. And this brings my thoughts to the subject of legislation. There seems to be among our membership two opinions. The one favoring a passive or non-active attitude and passing the responsibility for maintaining the high standards of practice squarely

over to the legislature. Aside from the State Department of Health the medical profession has had no assistance in its fight from local boards of Health or public officials, and I believe that since the benefits fall upon the public rather than upon us, the job is not entirely ours. Personally I am quite disgusted with the actions of legislators and perhaps if we left them severely alone for a term or two, allowing them to enact all the cult legislation they desired, I am quite convinced that it would react to a public demand for repeal with great benefit to scientific medicine, and a material surcease in our legislative efforts in the future.

On the other hand there is a group who favor an active legislative campaign—offensive as well as defensive. Among this group are the members of the Wayne County Medical Society Legislative Committee, and the State Legislative Committee. It appears that these two groups differ somewhat as to the method of procedure and the objects in view. Both are meritorious and both will bring results. From my knowledge of them it seems they could work together to mutual advantage. Dr. John Sundwall, chairman of our State Legislative Committee, has given the subject much thought and prepared a concise report. It deserves our careful consideration. We have lost in recent years such political craftsmen as Vaughan, Kennedy, Harison and Kiefer, and if we are to get anywhere we must pool our efforts, disregard personal ambitions and aspirations, and unselfishly and sincerely give the best there is in us to the cause.

5. Not infrequently after the passing of one of the members of our association we are apprised of the fact that he left for his wife and family little or nothing and practically no insurance. This is but another evidence of the sad economic condition of the doctor, showing that out of his income little or nothing can be saved for the rainy day.

Last November my attention was called to the fact that the dentists of the country had obtained group insurance at very materially reduced rates, and it was suggested to me that possibly the doctors might be able to obtain, through our society, this same type of insurance. Accordingly I brought the matter before the executive committee of the council at its meeting in December

and a committee of that body was appointed to investigate the proposition and report. Thus far, apparently, the committee has been unable to make much progress but it is still working and hopeful. The rates being very low I believe every doctor would be able to carry at least five or ten thousand of this insurance. Instead of constantly working and striving to do something for the dear public, I believe it our duty, occasionally at least, to do something for the doctor. I therefore recommend to this house of delegates that they instruct the council to most vigorously prosecute this proposition to the end that it be brought to reality as soon as possible.

6. The place of holding our annual meeting has been at times a matter of considerable controversy. Dissatisfaction with hotel accommodations, inconvenient and inadequate housing facilities for the sections and exhibits have been factors which have distracted largely the interest of many of our members. To eliminate largely the above conditions I would suggest that our by-laws be amended—easily done at this session of the house—to the effect that invitations from cities desiring to entertain the society be submitted to, and be in the hands of the executive committee of the Council at least thirty days prior to the annual meeting, together with the nature of the facilities and accommodations offered and that the council investigate and report its findings to the house of delegates. By so doing this house can exercise its proper prerogative as specified in the by laws to select its place of meeting, and doubt and dissatisfaction will be eliminated.

6. Each year adds to the toll of our membership who have passed on. Some time ago, during the course of the conversation with our secretary he suggested that we might very properly hold an annual memorial meeting at which time we could conduct a roll call of deceased members. As each name was called some friend or associate would give a brief obituary of the deceased. The idea impressed me as a good one, since it provides opportunity for reflection and relaxation not only, but we would receive a renewed inspiration to do better and greater things as the accomplishments of those departed had been reviewed. What a stimulus would have been ours from the obituaries of such men as Vaughan, Mc-

Graw, Carstens, Kiefer, Walker, and many others. Nor do I wish to infer that the great masters of our art are gone. Michigan has many and time will reveal more. I strongly advocate the holding of such a meeting. The only difficulty being, as I see it, since our time is so completely occupied during our three day session, just where to place it on our program. This difficulty will be successfully hurdled by the resourcefulness of our secretary.

The subject is brought before you with my earnest solicitation for adoption by this house with details to be worked out by the council.

The problems of various parts of the state differ according to conditions. What is a problem in one section is of no moment in another. This house is the great melting pot for their discussion. We should attempt to alleviate each other's troubles and to solve those concerning us all, but strictly local problems should be left to their respective societies.

Some of our Councilor Districts do not have adequate numerical representation on the Council. This holds true particularly in Wayne County. It is the duty of this House under both the present and the proposed constitution to create new Councilor districts, and we should not wait for legislative reapportionment before providing ample representation on the council for the membership from Wayne to which they are entitled. This should be attended to today.

And finally, your deliberations will of necessity provoke discussion because of differences of opinion. And it is good that it be so, since this would be a drab and sad world if we all thought alike. But I implore of you that at all times we consider ourselves such gentlemen as befits the dignity of our profession, and that our utterances, though argumentative in character, may not tend to separate, but to foster good will and thus to cement the membership of this great organization more closely together in the bonds of friendship and fraternity.

Speaker Pyle: The President's address will be referred to the Business Committee.

We will now listen to the annual report of the Council. Dr. R. C. Stone.

Dr. Stone: Mr. Speaker and Members of the House of Delegates: We have a very busy day before us. I am not going to take

up your time in order to talk at any length regarding the activities of the Council during the past year.

I only want to say that the Council is very appreciative of the splendid spirit of co-operation which has been manifested on the part of the House of Delegates as well as the members of the Society during the past year.

As Chairman, I want to say to you that the Council, each and every member of it, has worked efficiently and faithfully.

With these few remarks our humble Secretary will read to you the report of the Council.

REPORT OF COUNCIL

To the House of Delegates Michigan State Medical Society.

Gentlemen: Your Council tenders this as its Annual Report for 1929-1930. Supplementary to it are the several minutes and reports that have been published from month to month in the Journal.

Membership

On September 11, 1930, there were 3,340 members in good standing.

Finances

The following is the condition of our finances as revealed in the Balance Statement as of September 1, 1930.

	Debits	Credits
Old National Bank..\$	1,409.15	
Accounts Receivable	1,295.03	
Advertising Sales....		5,749.27
Annual Meeting.....		269.00
Bond Account Society	37,408.75	
Bond Account — Defense Fund.....	16,666.80	
Council Expense....	1,044.92	
Couzens Foundation		822.46
Delegates to Am. Medical Assn.	288.19	
Dues		19,795.00
Editor's Salary.....	2,328.00	
Editor's Expense....	578.05	
History Expense....	2,228.13	
History Reserve.....		1,182.30
Interest Account — Society		991.67
Joint Committee.....		1,717.85
Journal Expense.....	7,459.39	
Journal Subscriptions		8,385.60

Legislative Commission	147.81	
Medico Defense — Cash Account.....		4,202.83
Medico Defense — Reserve		16,756.80
Office Rent	800.00	
Postage and Printing	145.00	
Post Graduate Conferences	148.24	
Present Worth.....		22,420.00
Reprint Expense	1,068.87	
Reprint Sales		1,333.92
Provision for Doubtful Accounts		250.00
Secretary's Salary..	4,328.00	
Society Expense	4,607.37	
Stenographers	1,925.00	
	<hr/>	
	\$83,876.70	\$83,876.70

Activities

As imparted through the medium of the Journal, the following activities have been actively directed and applied:

1. Publication of The Journal.
2. Medical Legal Defense.
3. Joint Committee on Public Health Education.
4. Post Graduate Courses in Ann Arbor and Detroit in conjunction with the Post Graduate Department of the University.
5. Post Graduate District Conferences.
6. Legislative Conferences.
7. County Society Activities.
8. Entertainment of Officers and House of Delegates of American Medical Association.
9. Joint Activity with Standing Committees.
10. Individual Investigations.

It can be confidently asserted that the objects of our organizational existence have been pursued in fullest degree and that the ends attained have been to the enhancement of the health interests of the people and the professional interests of our members.

In all these activities reports have been frequently made and specific work commented upon. Your Council, therefore, is not incorporating these details in this annual report. It is ready to present specific

details should the House of Delegates so request.

Executive Committee

The Executive Committee of the Council consists of Doctors Stone, Corbus, Bruce, Cook and Le Fevre. Monthly meetings are held and Society business and policies receive intense consideration. The minutes of the committee are published in The Journal.

Revision of Constitution and By-Laws

Your Council recommends the adoption of the Constitution and By-Laws as presented at this session by the Revision Committee with the exception that standing or permanent committees be abolished.

Surveys and Studies

Our Society has conducted several worth while surveys and studies. Notable were those on Tuberculosis, Free Service Hospitals, Need of Additional Accommodations in State Institutions, etc. Valuable contributions have thus been made.

The Council feels the desirability of undertaking additional surveys and studies. There is a need now for a dependable presentation of facts relating to the criminal's mental state and the influence of heredity in regard to the crime he perpetrated. From time to time there will be opportunities and demands for further studies in reference to the work of various charitable agencies.

Your Council recommends that you authorize such surveys and studies when, in the judgment of the Council, there is a necessity for them.

Legislation

Your Council, after a careful study of past experiences and legislative contacts, is very strongly of the opinion that all matters pertaining to legislation should be referred to the Council. Further, that the power be invested in the Council to adopt such measures and to institute such activities as the interests of the people and of the profession may indicate as being most desirable. This is not to be construed as in any way eliminating or lessening the powers of a legislative committee as and when appointed.

Standing Committees

For years the Society has had standing or permanent committees for Public Health, Tuberculosis, Venereal, Medical, Education. Within recent years very little activity has been manifested and the achievements of

these committees have been of small moment. The President and the Council are vested with authority to appoint committees as event or occasions demand. Your council, therefore, recommends that these cited committees, and perhaps others,* be abolished and committees be appointed as the necessity requires.

Professional Problems

Existing conditions, governmental tendencies and economic problems reflect certain movements that are indicative of changing relationship between physician and patient.

The Council voices, in one breath, regret and admonition. To stay the tide the Council emphatically and urgently recommends:

1. A steadfast, unswerving loyalty to your County Society.
2. An increase of intense and sustained willingness to undertake an active part in your County and State society activities.
3. That you place your County, State and American Medical Association first in your loyalty. Undoubtedly there are worthy unaffiliated societies, but your interest in these must not be allowed to interfere with your loyal and active support of organized medicine.
4. That you endeavor to cause your local unit to dominate the activity in your County, and discourage hospitals from trespassing upon the scope of County Society Work.

Conclusion

Your Council reiterates that it will continue to represent the organization in the future, as in the past, so as to record the fullest measure of organizational activity and to acquit itself of the responsibilities reposed in it.

Speaker Pyle: The report of the Council will be referred to the Business Committee.

Business Committee

The Chair will appoint the following members as the Business Committee:

Dr. McKean, Wayne.

Dr. McKay, Manistee.

Dr. Denham, Kent.

Dr. Keyport, Otsego.

Dr. Wessinger, Washtenaw.

Are these delegates present? (They were.)

The next order of business is the election of the Nominating Committee.

The following were nominated:

Dr. Riley, Jackson.
Dr. Andrews, Kalamazoo.
Dr. Perry, Luce.
Dr. Luce, Wayne.
Dr. Ellet, Berrien.
Dr. Callery, St. Clair.

Speaker Pyle: Are there any further nominations?

Dr. W. E. Tew (Gogebic): I move the nominations be closed.

The motion was seconded by Dr. Chester, put to a vote and carried.

Speaker Pyle: The Chair declares the nominations closed. There are six nominees. I will appoint the following as Tellers:

Dr. Connelly, Wayne.
Dr. Dutchess, Wayne.
Dr. Treynor, Mecosta.

Dr. Hume: Do we understand that no two members of this committee are to be from the same Councilor district?

Speaker Pyle: Yes.

Gentlemen, you are to vote for five. The five receiving the highest number of votes will be elected.

Balloting proceeded.

Speaker Pyle: I declare the ballots closed.

Gentlemen, the Secretary will read the report of the tellers.

Secretary Warnshuis: Following is the report of the Tellers:

Dr. Riley.....	51
Dr. Andrews.....	30
Dr. Perry.....	35
Dr. Luce.....	50
Dr. Ellet.....	40
Dr. Callery.....	46

That makes those elected:

1. Dr. Riley
2. Dr. Luce
3. Dr. Callery
4. Dr. Ellet
5. Dr. Perry

Speaker Pyle: There were 60 votes cast and the chair will therefore declare Dr. Riley, Dr. Luce, Dr. Callery, Dr. Ellet and Dr. Perry elected as the Nominating Committee. Their duties are listed on Page 24 of the Bulletin.

President Brook: I have been apprised of the fact that recently Dr. Morris Fishbein and Dr. E. H. Carey, a noted oculist from Texas, have met with an automobile

accident in Iowa. I would suggest to this House that we instruct our Secretary to send to Dr. Fishbein and Dr. Carey and their wives a wire of sympathy and expression from this organization for their speedy recovery.

Dr. Connelly: I make such a motion.

The motion was supported by several.

Speaker Pyle: Our President has made a suggestion which has been supported by several, that wires of sympathy and wishes for a speedy recovery be sent to Dr. Fishbein and Dr. Carey and their families. Are there any objections to this motion? If not, the motion is carried and the Secretary is so instructed.

Next we come to the reports of the several committees.

Secretary Warnshuis: Mr. Speaker, the reports of the standing committees of the Society have been secured from the respective chairmen and have been published in the program. It would expedite the business of the House if somebody would make a motion that these reports, as printed, be referred to the Business Committee and they report on them at the session of this afternoon or this evening.

Dr. J. A. Wessinger (Washtenaw): I make such a motion.

The motion was seconded by Dr. Hume, put to vote and carried.

Secretary Warnshuis: There is only one report that has not been submitted to your Secretary for publication in the official program. That is the report of the Delegates to the A. M. A.

Speaker Pyle: We will listen to the report of the Delegate to the A. M. A., Dr. Hornbogen of Marquette.

REPORT OF DELEGATE TO AMERICAN MEDICAL ASSOCIATION

Mr. Speaker—Members of the House of Delegates:

Once again as your delegate to the American Medical Association, it is my pleasant duty to report to this body some of the proceedings and impressions of that long to be remembered meeting recently held in Detroit. It would be somewhat presumptuous on my part to repeat what you have read in the *Journal of the American Medical Association*, and your own State Journal, as I take it for granted that this House of Delegates take a keen interest in the proceedings

our parent organization. Having attended many meetings of the House of Delegates, I positively know that no two men will receive the same impressions and consequently no two reports will be the same. The stenographic proceedings of the work accomplished by the House of Delegates is so complete that it would be impossible for me to improve upon it.

Here is some history that I think you should all know! You all remember that two years ago at Minneapolis, the State Medical Society and the Wayne County Medical Society extended an invitation to have the meeting held in Detroit in the year of 1929, but unfortunately your State Society in connection with some other State societies failed to extend their invitations sixty days in advance of that meeting; and for constitutional reasons their invitations could not be considered by the House of Delegates. The State Medical Society of Oregon extended the only invitation that could be voted upon according to our Constitution, and for that reason the 1929 meeting was held in Portland. Your delegates promised, at Minneapolis, to work hard to secure Detroit for the next annual meeting. It is safe to say that no city or state who wanted the convention repeated the mistake made the year before, and four contestants, Atlantic City, Philadelphia, Memphis and Detroit, had many ardent supporters and after the first and second ballots Philadelphia and Atlantic City were eliminated. Then the real battle was fought between the North and South and your State won the prize.

It may not be known to you that early in 1929 two strong X-ray societies, one in the East and one in the West, organized a well conducted campaign to elect our friend and scientist, Preston L. Hickey of Ann Arbor, as president of the American Medical Association, at Portland. This campaign placed your delegates in a rather embarrassing position. With Michigan wanting the three major offices that the parent Society has to offer—and remember there are many states who covet these honors—your delegates considered that the House of Delegates would object to this State capturing all the honors, and in my mind, had we persisted, that hard boiled bunch of delegates would not have given us anything.

A cross section of that house will show

that the great majority are seasoned veterans. From Massachusetts, Connecticut, and Virginia on the east to California and Oregon on the west, New York, Pennsylvania, Missouri, Illinois, you find the same men year after year. Take for example in the Texas State Society, no man is eligible unless he is an ex-president, with the exception of the secretary; and believe me, that Holman Taylor is a powerful and energetic leader.

In order to make good our promises to Wayne County, the situation was explained to Dr. Hickey, who gracefully withdrew as a candidate at Portland and he would have been elected at Detroit, had his health not prevented him from entering the race.

The outstanding and unusual feature of the Detroit session was the dinner given to the ex-presidents at the Detroit Yacht Club by our State Society. I consider that your most worthy president, J. D. Brooks, was wise in selecting for toastmaster Dr. C. G. Jennings, who, as you all know, is a veteran of more than fifty years in practice of medicine. But you will have to agree that any man who can introduce to a very critical audience, fifteen men who have all held the same exalted position requires consummate skill on the part of the toastmaster. Your Secretary, the speaker of the American Medical Association House, suggested that the responses of the ex-presidents were to tell briefly what they thought was responsible for their success and achievements. You should all reread the complete transcription in the State Journal. In analyzing the careers of many of the celebrated who have achieved great scientific success and where each one gives as the determinant factor of his success his father who preceded him in medicine, or some outstanding teacher like Christian Fenger with whom he had been closely associated as an intern, as was told in the response of Frank Billings, one wonders whether the present system with its "depersonalization," its separation of the student from intimate association with his clinical teachers, its abolishment of the preceptor system, will produce the effective results that have been brought forth in the past.

I very much doubt that our present system of medical education will produce as great a percentage of eminently successful

men in the future as has been achieved in the past.

In the election of a president, the House of Delegates showed their wisdom in selecting E. Starr Judd. This man, in my estimation, will do some great constructive work for the rank and file as well as the public during his administration. As you all know, a member of the Wayne County Medical Society was elected as first vice president by common consent of those of you who worked with him. The success of the meeting to a considerable extent was due to hard work. During those months preceding the meeting, the committees granted him the leadership as an untiring worker, and much of the success of the meeting can be attributed to the ability and geniality of Louis J. Hirschman.

In the August number of our State Medical Journal you read that beautiful letter of appreciation to Fred C. Warnshuis under the instruction of the Board of Trustees and the House of Delegates. It would be impossible for me to improve upon what Olin West said about the arrangements, entertainments, and facilities provided at Detroit. He certainly emphasized the fact that was felt by those who attended many meetings that the Detroit session would linger long in our memories. And, of course, that most able and celebrated Speaker of the House of Delegates who was elected many years ago at New Orleans, by the unanimous consent of the members of the House was again elected speaker. The fact that he has become a National figure is entirely due to his knowledge of parliamentary practice plus his unbiased appointments of members upon many committees. These marked abilities, coupled with his personality, make his election each year comparatively easy.

One of the outstanding features of the Detroit meeting was the presentation of emblems of living past presidents. The presentation ceremony was very impressive and was conducted by Dr. Edward B. Heckel, president of the Board of Trustees, assisted by Dr. J. H. J. Upham, vice chairman.

Now gentlemen—I wish to express my thanks that I was once again enabled to make a report to this House. And I am sure that you appreciate the work that your delegates have accomplished in the past by

putting Michigan on the map with the greatest of all Medical Societies.

I thank you.

A. W. HORNBOKEN.

Speaker Pyle: Dr. Hornbogen's report, including the bouquets, will be referred to the proper committee.

We now come to resolutions and new business.

Dr. Dutchess: The mortality figures of Michigan for the past year show that cancer has taken second place as the cause of death in this state, just as it has done elsewhere. A critical examination of the mortality figures in comparison with autopsy reports indicates that the real cancer mortality is much higher than the published figures would show.

To bring out what this means, let me point out that if this group of men should follow the average of all physicians dying in the United States in the last three years there are four or five men here who will die of cancer.

Why the State Medical Society of Michigan has not followed the example of many other medical societies in taking its place among the forces which society has mobilized to fight the growing menace I do not know. I feel that we are derelict to our duty to the state and therefore I propose a motion.

Motion made by Dr. Charles Dutchess of Wayne County

RESOLVED:

That this House of Delegates, before the close of today's last session, create a permanent cancer committee of the Michigan State Medical Society, this committee to be composed of ten members appointed by the Speaker, two members' terms to expire each year and their successors to be appointed by the speaker for five year terms, at the time of the annual session of the House. The first chairman shall be appointed by the Speaker and shall serve for five years. At the expiration of the chairman's term of service on the committee the succeeding chairman shall be appointed by the Speaker from the remaining members of the committee except when a retiring chairman may be reappointed to the committee and the chairmanship.

I note that the Council has recommended the abolishment of permanent committees

and the principal reason offered, as I got it, was that they have proved to be unnecessary, or, what is more to the point, frequently inactive. I can only say that in case a committee is unnecessary of course there is no reason for continuing it. But, if there is work to be done by a committee and the committee proves inactive it can only serve as a reflection on the man who appointed it, or there may be some extenuating circumstances which may have prevented the doing of effective work.

I do not feel that there is any sufficient reason why there should not be a permanent cancer committee working at all times for the State Society. The bad feature about a permanent committee, if it is composed of the same men all the time, is obvious. This resolution provides for a revolving membership on that committee.

Speaker Pyle: This resolution will be referred to the Business Committee.

Is there any new business to come before us?

Dr. Whitaker: I wish to present the following resolution for the consideration of the members of the House of Delegates:

Dr. Whitaker read his prepared resolution:

Whereas, the branches of medicine consisting of Dermatology, Syphilology, have in recent years assumed a very important place in the practice of Medicine; and

Whereas, in the State of Michigan there is a large Dermatological Society including in its membership outstanding Dermatologists; and

Whereas, it is the desire of the Dermatologists, Syphilologists of Michigan to form a section;

Therefore, be it resolved, that the House of Delegates of the Michigan State Medical Society request the Speaker to form a special committee to study the advisability of the formation of such a section, this committee to report back at the next session of the House of Delegates with its findings and recommendations.

Speaker Pyle: I will have the Secretary re-read Dr. Whitaker's resolution.

Secretary Warnshuis re-read Dr. Whitaker's resolution.

Secretary Warnshuis: You mean that should be either this afternoon or this evening? If the resolution is accepted by the House it becomes necessary for you to ap-

point that committee and refer this matter back to that committee.

Dr. Hasley: I move the adoption of that resolution.

The motion was seconded by Dr. Barone, put to a vote and carried.

Dr. Whitaker: In our President's address he made a certain recommendation which I wish to put in the form of a resolution for the consideration of the members of the House of Delegates.

Whereas: Recorded experiences in other states reflect the benefits that result from annual re-registration of all who are licensed to practice medicine and surgery, and,

Whereas: Annual re-registration will eliminate many of the evils now existent and involving those who are now licensed in Michigan, therefor

Be It Resolved: That the Michigan State Medical Society endorse a proposed amendment to the present medical practice act that will institute annual re-registration in this state.

Dr. R. M. McKean (Wayne): The results from such an amendment are perfectly patent as far as the advantages and disadvantages are concerned. I think it means a stronger looking over than we have had a chance to give it thus far. I would suggest that a committee be appointed for the consideration of this particular amendment and they submit a report. I make that as a motion.

The motion was seconded by Dr. Wenger, put to vote and carried.

Dr. Hirschman: I move that the committee to which this resolution is to be referred be the Legislative Committee. I think it would come under that head. I make that as a motion.

Dr. E. J. McIntyre (Ingham): I support that motion.

Dr. Whitaker: I would like to say that we have the president of the Detroit Dermatological Society with us, one of the largest in the country. I suggest that he be included in that committee when the arrangements are made.

Speaker Pyle: I haven't the power to appoint him to the Legislative Committee.

Dr. Whitaker: I merely offer that as a suggestion, that he be consulted on the findings.

Dr. F. W. Garber (Muskegon): If it is

pertinent to the subject I wish this committee on the resolutions offered relative to registration would list the arguments pro and con and tabulate them in some form so that the delegates may know something about the subject. I know very little about it and I am pretty certain that the majority of the others are in the same way. If we can have the arguments arranged in some sort of order so that we can pass on them with some sort of intelligence it will mean a good deal more.

Speaker Pyle: The suggestion is well taken and the chair will so instruct the committee. Are there any objections? Is there any other new business?

Dr. J. R. Rupp (Wayne): I would like to bring this up under the head of new business.

Whereas, the economics of the practice of medicine must ever, for fundamental necessity, be a matter of very vital concern and discussion of the State Medical Association,

Whereas, the delegates representing our various constituent local county societies should ever be on the alert to see that the best practical methods for carrying out charity medical work be used and,

Whereas, the Michigan State Medical Journal in the August, 1930, issue contains the following paragraph describing the methods used by the Berrien county medical society:

There are no municipal clinics. Indigent cases come under the care of welfare workers and the public health nurses. Where medical attention is necessary the patient is allowed to choose his own physician and the bill for medical services is certified by the social workers and paid by the municipal governments. A reasonable fee is allowed and there is very little criticism on the part of the public or the medical profession.

Therefore, be it resolved that we, the House of Delegates, compliment the Berrien County Medical Society as using the best practical methods consistent with all the ethics and traditions of our profession and,

Further, be it resolved that the various county societies follow their splendid example and apply such methods throughout the state as far as possible during the coming year.

Speaker Pyle: This resolution will be referred to the Business Committee.

Dr. Hasley: I rise to a point of information. We haven't had the report of the Constitution Committee. I wonder if that is in order at this time?

Secretary Warnshuis: Under the Order of Business if you will notice the second session, Item No. 3, "Revision of Constitution and By-Laws." The report of the committee will come up this afternoon.

Speaker Pyle: If there is no further business at this time the House will recess until two-thirty this afternoon.

The House recessed at twelve o'clock.

MONDAY AFTERNOON SESSION

September 15, 1930

The meeting convened at two-thirty o'clock, Speaker Pyle presiding.

Secretary Warnshuis: I hold in my hand a sufficient number of slips for accredited delegates to constitute the roll call of the House this afternoon. I move that this constitute the roll call of the House.

Dr. Hume: I second the motion.

The following had signed the roll call slips held by Secretary Warnshuis:

Alpena County: E. L. Foley, Alpena.
 Northern Michigan: D. L. Duffie, Central Lake.
 Berrien County: W. C. Ellet, Benton Harbor.
 Branch County: A. G. Holbrook, Coldwater.
 Calhoun County: C. S. Gorsline, Battle Creek; George Hafford, Albion.
 Cass County: W. C. McCutcheon, Cassopolis.
 Clinton County: W. A. Scott, St. Johns.
 Genesee County: J. T. Connell, Flint; G. J. Curry, Flint; M. S. Knapp, Flint.
 Grand Traverse-Leelanau: E. F. Sladek.
 Kalamazoo-Van Buren-Allegan: F. T. Andrews, Kalamazoo; F. C. Penoyer, South Haven.
 Kent County: R. G. Denham, Grand Rapids; A. M. Moll, Grand Rapids; A. V. Wenger, Grand Rapids; W. E. Wilson, Grand Rapids.
 Macomb County: J. E. Curlett, Roseville.
 Marquette-Alger: V. H. Vandeventer, Ishpeming.
 Mason County: L. W. Switzer, Ludington.
 Muskegon County: F. W. Garber, Muskegon.
 Oakland County: C. T. Eklund, Pontiac; Frank A. Mercer, Pontiac.
 O-M-C-O-R-O: C. R. Keyport, Grayling.
 Saginaw County: C. E. Toshach, Saginaw.
 Shiawassee County: A. M. Hume.
 St. Joseph County: C. G. Morris, Three Rivers.
 Wayne County: A. U. Axelsson, Detroit; Charles J. Barone, Detroit; Clarence L. Candler, Detroit; J. L. Chester, Detroit; Norman Clarke, Detroit; Basil L. Connelly, Detroit; J. D. Curtis, Detroit; Charles E. Dutchess, Detroit; B. U. Estabrook, Detroit; H. B. Garner, Detroit; L. O. Geib, Detroit; C. K. Hasley, Detroit; L. T. Henderson, Detroit; C. B. Lakoff, Detroit; H. A. Luce, Detroit; R. M. McKean, Detroit; G. C. Penberthy, Detroit; J. R. Rupp, Detroit; A. H. Whitaker, Detroit.
 J. D. Brook, President.
 B. R. Corbus, Acting Chairman of Council.

BUSINESS COMMITTEE REPORT

Speaker Pyle: We will have the next order of business, the report of the Reference Committee. Dr. McKean is the chairman, but Dr. Denham will give the report.

Dr. R. G. Denham (Grand Rapids): Regarding the motion offered by Dr. Dutchess: After careful consideration the com-

mittee heartily endorses this motion and asks that the members of the House of Delegates take favorable action upon it.

Dr. Dutchess' resolution with reference to the formation of a Cancer Committee was read.

Dr. Barone: I move the committee's recommendation be accepted. Also, the Speaker should appoint such a committee.

The motion was seconded by Dr. Garner (Wayne) put to a vote and carried.

Dr. Denham: Your committee approves the resolution of Dr. Rupp relative to the care of indigent sick in Berrien County.

Speaker Pyle: As long as the committee approves of the resolution there is no further action necessary.

Dr. Denham: The matter of re-registration having been sent to another committee it was not considered by your Reference Committee. The report of the Delegates to the American Medical Association was approved.

Speaker Pyle: Gentlemen, as Dr. Denham reads the various paragraphs if you have any objections we will give you the floor. Otherwise, he will read all of the paragraphs right through.

Dr. Denham: The Speaker's address has been read and approved.

The President's address has been read and approved.

We concur in the idea, regarding the Speaker's address, that the revision of the Constitution is an important matter and suggest that the new Constitution and By-Laws be taken up and considered carefully, section by section.

We recommend that the group insurance question be brought to some definite conclusion. That has held over from last year. We think it ought to be concluded in some manner.

The committee concurs in the expression of the President that the invitation to the Society to meet the following year be in the hands of the Council thirty days prior to our annual meeting.

The report of the Council is approved. We believe, however, that the question of abolishing standing committees should be given careful consideration by the House and in particular do we refer to the proposed action of placing the entire legislative activity into the hands of the Council.

The report of the Legislative Committee

was an excellent piece of work. After reading this report we felt that that committee should be continued.

The report of the Committee on Tuberculosis was approved.

The report of the Committee on Hospital Survey was approved.

The report of the Committee on Medical Education was approved.

The very excellent report of the Committee on Public Health was approved.

That most excellent report of the Medical History Committee is approved and it is suggested that a vote of thanks be tendered Dr. Burr and his collaborators for their magnificent work.

Speaker Pyle: You have heard Dr. Denham's suggestion that a vote of thanks be given to that committee.

Dr. C. S. Gorsline (Calhoun): I make a motion that we follow the committee's suggestion.

The motion was seconded by Dr. Hume, put to a vote and carried.

Dr. Denham: The report of the Committee on Civic and Industrial Relations is approved. We feel that the adoption of the resolution in Section 5, as printed in your program, will work a hardship, not upon the insurance companies but upon the patient. We think that the charge should be left to the discretion of the attending physician. If we thought there was a way of forcing the company to pay that charge we would concur in the opinion of the committee but we are unable to discover a manner in which we can have the insurance company take care of that charge.

Speaker Pyle: Does any one wish to discuss that question?

Dr. Gorsline: This matter of making out the various blanks has gotten to be a very arduous duty that is thrust upon us. I know that I have talked with Dr. Collisi in regard to the matter.

In principle the whole thing is right. It seems to work out. I have not met with opposition from the life insurance companies in making out the blanks. But, I do feel that while we are perfectly right in expecting pay for making out the blanks I do feel that the average workman hasn't the wherewithal to pay for it at all times. This has really gotten to be an awful burden. Where anyone is doing a large volume of industrial work it takes a large part of one person's time—at least that of a clerk—to make out these papers. The poor fellows cannot get their insurance until these are filled out.

Some of them have never read the blanks that they signed. Sometimes they have agreed to bear the expense of that matter. I do not think it is right for the profession to have to do it for nothing. On the other hand, I do not see that it is clear how

we are going to make it payable by the cheaper insurance companies. The better insurance companies usually will send the blank and expect to pay a charge for having them filled out.

I wish this might have a good deal of discussion because I know that Dr. Collisi has also sensed the same thing that I am telling you now. I wish we might have a discussion on this and see if anybody has any suggestions whereby the whole setup can be arranged so that we will at least get paid for a little of the time it takes to make them out.

Speaker Pyle: We will give Dr. Collisi, as chairman of that committee, the floor.

Dr. H. S. Collisi: That objection has been brought up by the committee and it is perfectly justified. One of the reasons that the committee formed this resolution and presented it to the House of Delegates for action was because in the resolution that was passed last year at Jackson there were no teeth as regards the health and accident insurance companies. There was no way of fixing the responsibility for the paying of filling out health and accident reports. For that reason this resolution was presented to you this year.

In our survey of the insurance companies a year or two ago it was plain that the insurance companies do not wish to take any responsibility in the matter of paying a fee for filling out the insurance blanks. Rather, they are inclined to put the responsibility upon the medical profession. They feel if a claimant wishes to have a report blank filled out it is up to the physician to take the time to fill it out free of charge. There is only a very small percentage of them who have offered the suggestion that the claimant himself should pay for it.

As the matter stands now, your resolution really means nothing. We cannot endorse it because we cannot force the insurance companies to pay the bill unless we refuse to fill out the blanks. On the other hand, we cannot refuse to fill them out for the claimant because if we do he cannot, according to the terms of his policy, put through the claim.

It would seem that your committee, in recommending this action, presents a way by which the responsibility may either go to the claimant or upon the insurance company, at the discretion of the physician. That is the reason for this resolution.

Dr. Hume: This is an old question, as far as I am concerned. It has been before me personally for years. Dr. Gorsline has expressed my sentiments and my ideas on what we would do. First of all he has said what we can do; then what we should do in these cases. Those patients are really our private patients. In cases where we can collect from the injured party we can do that because it is a matter of our ordinary business. However, there are certain cases where we cannot do that. That should be left to our own discretion. I do not think there is any other way to handle it.

Dr. F. W. Garber (Muskegon): It seems to me that in the discussion of this matter the absolute point has been missed. If a bank or any business institution wishes to make a loan on a piece of property they call in an attorney to decide if that is a legitimate loan, and to see whether the title is perfect or not. The insurance company bases its payment absolutely on the statement of the physician as to whether that claim is a just one or not. They are the ones who are getting the service which determines how much they shall pay.

That being the case, it seems to me that it is up to them to decide whether that title to the property, or whatever it is they are paying on, is perfect or not. Of course, a physician might make the cost of making out the paper to the insurance company a good deal more than it should be. I am not suggesting that he should be dishonest about it at all.

But I think that the responsibility lies with the insurance company.

Speaker Pyle: Is there any further discussion, gentlemen? If not, we will ask Dr. Denham to go on with his report.

Dr. Denham: The report of the Committee on Legislation and Public Policy is approved and we feel that that report speaks strongly for the retention of such a committee.

I move that these reports be accepted.

The motion was seconded by Dr. Garber, put to a vote and carried.

Dr. Hume: I do not wish to interfere with the work of the House, but I do wish to say that Dr. Dodge, who was president of our Society a few years ago, has been in poor health for some time. I would move that a telegram be sent him from this body regretting that he is not able to be with us and trusting that in the future he may be here as he was in the past.

Speaker Pyle: It is not the regular order of business but still it is the sort of business that should be attended to immediately.

The motion was seconded by Dr. Gorsline, put to a vote and carried.

The next order of business is the report of the Committee on the Revision of the Constitution and By-Laws. Before we take that up there is a supplementary report from the Council which we will take up at this time. Dr. Corbus.

Dr. B. R. Corbus (Grand Rapids): Mr. Speaker, House of Delegates: I regret to announce the resignation of Dr. Stone as chairman of the Council. He has been a very efficient, earnest worker in the Council for ten years. For most of those years he has been the presiding officer. Much of the advancement that the State Society has made has been due to the amount of work, the earnest work at a great sacrifice of time and energy that he has given to us.

At the last meeting of the Council the following action was taken. The Council records its approval and endorsement of the plans as outlined by Dr. Bruce for the organization and conduct of the Upper Peninsula Diagnostic Clinic under the guidance and supervision of the State Society, the Post-Graduate Department of the University of Michigan and the Couzens Foundation.

I will ask the privilege of the floor for Dr. Bruce for ten minutes in order that he may tell the House of Delegates the substance of the occasion for this action.

Speaker Pyle: We will hear from Dr. Bruce.

Dr. Bruce: Mr. Speaker and Gentlemen: Most of you are familiar, I believe, with the donations of Mr. Couzens during the last several years in the interests of child welfare.

A little over a year ago he made a much larger contribution in the sum of \$10,000,000 which is to be expended at the rate of \$700,000 a year in the interests of the welfare of the children of Michigan and of the country generally.

Many activities have been undertaken in the expenditure of those funds and in the development of those interests. Sums of money have been given to the University, to many operating units within the state, and to many units outside the state operating on behalf of the problems of childhood.

Some months ago, after a survey of the state, it was determined by the Michigan Children's Fund—which is the official name of the organization—to put a clinic, with nurses and doctors and everything necessary to take care of a very considerable group of children, into the Northern Peninsula.

At that time the tentative plans embraced the building of a children's hospital, its equipment and staffing with nurses and doctors for the development of that work. Before plans had matured in that regard I was asked to go over the plans with the Couzens Committee. I suggested to them that a further survey be made to confirm the opinion they had that that was the best way of dealing with the situation in the Northern Peninsula, and that it was the best way of reaching their ultimate objective of the betterment of conditions of childhood.

After a further survey they concluded that there were enough hospital beds in the Northern Peninsula at this time but that the means of getting children to the sources at which health might be obtained were not available. At that time I suggested that probably the best method of getting the things accomplished for which they wished was to increase the ability of the doctor to meet the local situation besides bringing the case to the doctor himself.

After studying the situation for some time it was decided that the University and the State Society enter into a contact with the Couzens Fund with a view to establishing a medical center in northern Michigan. That was the suggestion that was

decided upon. A clinic building would be erected for purposes of diagnosis and for treatment, and the work would progress under the auspices and control of the Department of Post-Graduate Education of the University of Michigan and the Michigan State Medical Society. At regular intervals during the year clinicians and teachers would be sent there and diagnosis would be made; demonstrations would be made upon the clinical material afforded. In that way they would establish, really, an extension of the University and of the State Medical Society.

Thus far the profession in northern Michigan have been approached on the subject. Last March, together with Mr. Norton of the Couzens Fund, we met with the local profession at Marquette. A committee was organized there to consider the proposals. They accepted the recommendations that were made at that time.

Last week, in conjunction with the Council of that district, Dr. Burke, I made a tour of the entire Northern Peninsula. We had meetings at the Soo, Marquette, Holton, Ironwood and Escanaba. At each of these points committees were formed of the local societies whose duties and responsibilities were to study and develop the ways in which the use of the money and the nursing personnel, and so forth, would be utilized to bring about the best results which Mr. Couzens had in mind, that of the betterment of conditions of childhood in that area.

Of course, there are a lot of details in the matter, but the general plan which was agreed upon by the profession of the north, and which we propose, was that the work was to be entirely in conjunction with the local medical profession.

We know that very often, no matter how laudable the purpose of these large foundations may have been, yet with large sums of money at their disposal as public servants the personnel have gone about to do a certain duty and in their zeal they have often overrun what we regard as the proprieties of medical practice. We have every assurance that that will not be done in this instance because the professional activities are entirely under the control of the department which I represent in the University, and under the control of the committees among the profession locals, and, of course, the profession in the state.

If you have any questions with reference

to this matter I will be glad to answer them. However, I feel that this is all I would be justified to say now in explanation of this project. I do not care to encroach upon your time.

Speaker Pyle: Gentlemen, what is your pleasure regarding the supplementary report of the Council and the remarks of Dr. Bruce?

Dr. Barone: I would like to know how the delegates from the Upper Peninsula feel about it.

Dr. Bruce: I do not know who the delegates from the Northern Peninsula are but I met with the Society in groups at the Soo. Every member of that district was there except one. At Marquette we had an attendance of about 50 or 60. Each of the other meetings was attended by proportionate numbers. There was universal accord on this matter. They all appointed committees to work with the Fund in the prosecution of this work.

Dr. Barone: Have the committees reported back to you as yet?

Dr. Bruce: The Society gave its approval and appointed a committee to coöperate with us. Their duty now is to make a study of the local situation and report back in what way this operation can be developed in the best way in their individual communities.

Speaker Pyle: Is there any other discussion, or are there questions that you wish to ask Dr. Bruce? What do you wish to do with the supplementary report of the Council?

Dr. Corbus: If it were the desire of the House—and since Dr. Denham brought up the question of group insurance—the Council could give some findings on group insurance. Dr. LeFevre will tell you about it as far as we have gone, if that subject should be in order.

Speaker Pyle: What about the supplementary report? What is your pleasure regarding that?

Dr. Hasley: I move that it be received and placed on file.

The motion was seconded by Dr. Barone, put to a vote and carried.

Speaker Pyle: Would you like to hear further on group insurance from Dr. LeFevre?

Dr. Denham: Wouldn't that come under unfinished business? That is business that has been carried over for a couple of years.

Speaker Pyle: That is the chair's opin-

ion. The chair believes it would be better to bring it up under the head of unfinished business. If that is agreeable to those gentlemen I think it will be best to do it that way.

We will, therefore, call on Dr. Manwaring, chairman of the Committee for the Revision of the Constitution and By-Laws.

REVISION OF CONSTITUTION AND BY-LAWS

Dr. J. G. R. Manwaring: At the last meeting of the State Society the committee was appointed to revise the Constitution and By-Laws. I do not know how it happened but I was notified the latter part of June that I was the chairman of a new committee which was to take up the matter and present it. I thought it was a rather bad thing to start in so late.

At the time of the notification I received a copy of the Constitution and By-Laws, modeled partly, I understand, after a standard form of that kind which the A. M. A. puts out and adapted to our own needs. After going over that with the old one, and several others that I had on file from previous experiences, I thought it wasn't so very bad.

I sent copies of it to the other members of the committee. They wrote me that they didn't think a meeting was necessary for the purpose of taking it up. They approved of the changes with some minor suggestions for further change. These suggestions were followed. It is that Constitution and By-Laws that you have printed in your Journal and which has been published in the Bulletin of the Society.

The changes are not flagrant. One of the important ones is that the president is nominated from the floor of the House of Delegates. Early in our career you nominated him through the medium of a Nominating Committee. Later on he was nominated in the General Assembly. Considerable fault was found with that. Therefore, this time it is specified that he be nominated from the representative body here, the House of Delegates.

Another change is to do away with the Nominating Committee entirely.

Since this was published it has been pointed out that some things in it are vague. As far as I know in one place it states that, as far as general officers are concerned, no delegate shall be eligible to election as a general officer. The question that came up was the interpretation of the term "gen-

eral officer." It seems that a Councilor could very readily be made out of a good delegate. There should be no objection to that. A Councilor is nominated locally and possibly he wouldn't be a general officer. I think that can be clarified when we come to it. I am not a delegate and haven't the authority to make those motions, but I suggest that the Secretary read the report as published and you can act on the matter in the regular manner.

Speaker Pyle: The Secretary will now read the report of the committee on the new Constitution.

As the Secretary reads the different sections you will have occasion to take the floor. If you wish to make remarks at that time it will be in order.

Dr. Denham: Are you going to adopt this section by section as read?

Speaker Pyle: If we did that it would take a motion each and every time. The chair feels if there is no discussion on the section, and there is no change, and no one cares to make a change that we could pass on, then when you are all through with it you can move for the adoption of the whole as amended or substituted. The chair feels it would expedite matters. I will be glad to have any help on that matter.

Secretary Warnshuis read Article I.

Secretary Warnshuis read Article II, Sections 1, 2, 3 and 4.

Secretary Warnshuis read Article III, Section 1, Members.

Dr. Hasley: I move the substitution of the following: "This Society shall consist of members, honorary members and associate members." That is the only change, and then continue on with the balance of the section.

The motion was seconded by Dr. Barone.

Speaker Pyle: Is there any discussion?

Dr. Corbus: The Council suggests practically the same thing, that the designation be changed to "associate members" in place of "honorary members," having the same thought as the gentleman who preceded me.

Dr. Hasley: "Members, honorary members and associate members." There are three divisions.

Dr. Corbus: The Council wouldn't object to that. "And that County Societies shall charge them their local dues out of which the Journal subscription is to be paid and that these members shall receive the Journal." We feel that loyalty to the So-

ciety would be increased by having them receive the Journal and that it would be to the best interests of the Society to have them receive the Journal.

Speaker Pyle: Are there any further remarks on Dr. Hasley's motion?

The motion was put to a vote and was carried.

Reading of Section 2, Article 3.

Dr. Dutchess: May I inquire if this ruling about institutions being accredited by the American Medical Association at the time of conferring such a degree applies? It might be possible that it might exclude some members in good standing in our present organization.

Dr. Hume: I think it would have some effect because we have members in the Society who, at the time they graduated, were in schools of which the American Medical Association had not approved.

Dr. Dutchess: I move that a substitution be made to make an exception in favor of all men who are now members in good standing of any of the component Societies.

The motion was seconded by Dr. Hume, put to a vote and carried.

Reading of Section 3, Article 3.

Dr. Hasley: I move the following substitution: "Honorary Members—The House of Delegates on recommendation of a county society may elect as an honorary member any persons distinguished for their services or attainments as Doctors of Medicine or in the field of public health or research, or other scientific work contributing to medicine. Honorary members shall not pay dues and shall not have the right to vote or hold office."

Dr. Dutchess: What is the change?

Speaker Pyle: Some words have been left out there. Will you tell us in two or three words what the difference between the two is?

Dr. Hasley: We leave out the approval of the Council. We say that the "House of Delegates on recommendation of a county society may elect as honorary member." That is the essential difference.

Dr. Barone: I will second the motion to change.

Dr. H. B. Garner (Wayne): We have with us in our Society an honorary member who was elected because of his distinguished years and not because of service particularly. He is 95 years of age and has been a member of our Society for a long time. He has

retired. He has not been particularly distinguished for any attainment in medicine. His only claim to fame is that he is 95 years old. Under that wording this man would be excluded.

Speaker Pyle: The way the chair sees it, it says "service." Age would mean that. What is your wish? The chair feels that it is included and in the nature of things I presume that could be carried out.

The motion made by Dr. Hasley was put to vote and carried.

Reading of Section 4, Article 3.

Dr. Hasley: In order to keep the articles in agreement I think this should be changed a little, too. I move the following substitution: "Associate Members—County Societies may elect as Associate Members any person distinguished for his service in the allied sciences or in the field of public health and upon the recommendation of a county society the House of Delegates may elect such nominees as Associate Members of this State Society. They shall not pay dues in the State Society nor shall they have the right to vote or hold office."

Dr. Barone: I second that.

Dr. F. T. Andrews (Kalamazoo): This "his" applies only to the masculine gender as I understand it. In the past there have been some women who have aided us in our practice of medicine and who have attained certain heights. Therefore, I think the "their" is absolutely satisfactory in this case.

Dr. Hasley: I accept the correction.

Dr. Hasley's motion was put to vote and carried.

Dr. H. A. Luce (Wayne): Dr. Corbus in his recommendation to the House with reference to honorary and associate members suggested that they pay for the Journal, which they should receive. That is for Associate Members only and not for honorary members. I think that is a matter that should be covered here before we go any further.

I would make that as a motion that the Associate Members pay the cost of the Journal.

Dr. Corbus: The suggestion of the Council was that they pay their local dues out of which the Journal subscription is to be paid and the Journal received by them.

Dr. George Hafford (Calhoun): The last section that was read doesn't absolve them from the county dues, only from the state dues. As it appears I think the county

dues would still be levied on them.

Speaker Pyle: First of all there was Dr. Hasley's substitution which carried. Then Dr. Luce moved that these members pay their county dues out of which the fees for the Journal would be collected. The way the chair understands it it has not been taken care of.

Dr. Dutchess: Let me point out that the county dues in some counties are high. Some associate members, internes for instance, would find it difficult to pay them.

I wish to offer an amendment to Dr. Luce's motion, that in case the County Society feels that the county dues would work a hardship on the members proposed as Associate Members they may charge them such lesser sum as they deem fit and that sum should include the subscription to the state Journal.

Dr. Hirschman: It is decidedly out of order because there we are trying to dictate to the County Societies as to what they should or should not charge for dues.

Dr. Curtis: We have Associate Members. I do not think that the State Society dictates what we are going to charge our Associate Members. We know that we have to pay so much for the state Journal. I think it should be left to the County Societies just as this other is. "They shall pay the County dues." They may not be \$30 a year for an Associate Member, but they should be whatever the county charges. Just let it go the way it is.

Speaker Pyle: Is there any further discussion on this? There was an amendment made to Dr. Luce's motion.

Dr. Dutchess: If I may be assured that the meaning of the expression "county dues" is an indefinite sum which each county may decide upon, I will withdraw my motion.

Speaker Pyle: The motion is withdrawn.
Reading of Section 5, Article 3.

Reading of Article 4, Sections 1, 2 3, 4 and 5.

Dr. Denham: I suggest that Section 5 be eliminated and be changed to read as follows:

"Section 5. Elections. The House of Delegates shall at the regular annual session elect the President, President-Elect, a Speaker, a Vice Speaker, and the members of the Council. Secretary and Treasurer shall be nominated by the Council and elected by the House of Delegates. In case the nominees are rejected the Council shall

immediately present other nominees for consideration by the House of Delegates. In the event that the Council fails to present nominees the nomination and election of Secretary and Treasurer shall automatically devolve on the House of Delegates."

Dr. Hafford: I do not see why that should read that way. I think it should say that on the recommendation of the County Societies the Councilor of that district shall be elected.

Dr. Basil Connelly (Wayne): I second Dr. Denham's motion.

Dr. Denham: I would like to strike out "and members of the Council."

Speaker Pyle: Do you understand Dr. Denham's motion? First of all he read it and then he struck out the words "members of the Council."

Dr. Dutchess: Does that mean we do not elect the members of the Council?

Speaker Pyle: Will you give us your meaning on that?

Dr. Denham: If I understand it, we do elect them. I will leave that in "and members of the Council."

Dr. Denham re-read his substitution.

Dr. Wenger: In another place in the Constitution there is provision made for the county society to nominate Councilors. They recommend the Councilors to the House of Delegates. That is all provided for in another part of the Constitution.

Dr. Corbus: May I point out to the House of Delegates that there is a very grave danger should you decide to accept the suggestion that is made by Dr. Denham. As long as the Secretary of the State Society is a definite employe of the Council we have control of the Secretary. When that is taken out of our hands we have no control. Your Secretary then becomes a dominant force in Society activities. The Executive Committee is then dominated by the Secretary. The Secretary is no longer dominated by the Executive Committee of the Council, meeting, as they do, once a month. You throw the business of the Society into the hands of one man. I feel that it is a dangerous proposition.

I do not hesitate to say that it could become something of a political matter, more than it is now. I would like to say that it would be difficult to find a Secretary to bring to this body. We have tried it in the past. With the organization we have at the present time and the amount of business we do,

you cannot keep on changing Secretaries frequently.

It is within the hands of this body at any time they feel that the Secretary or Treasurer of the State Society, or the chairman of the Council, is not in sympathy with them or they with him, to give a vote of lack of confidence in the officer.

I assure you any time this body feels that the chairman of the Council, or the Secretary of the State Society, or the Treasurer of the State Society is not favorable to them if they will show it to us by a vote the Council, as creatures of the House of Delegates, will change officers.

Dr. Denham: I do not feel that the House of Delegates is taking any prerogative from the Council. They feel we are taking that by the substitution of this section. Council still has the privilege of nominating the Secretary. This simply gives the House of Delegates a check which I think will never be exercised in a political way.

I feel that the House of Delegates should have something to say regarding the Secretary. If I am correctly informed, such is the case with the American Medical Association.

Dr. Corbus: We have the privilege, under these conditions, of nominating, but we haven't the privilege of discharging him off-hand. We have no contract with our present Secretary and we can tell him tomorrow that his job is over at the end of the month if we wish. If you do not do that we cannot do a thing with him for 12 months.

Dr. Hirschman: I believe the point that Dr. Corbus just brought up is one that is worthy of a little amplification. We should have the sharpest and strongest control over the officers who disburse our funds and who act as the mouthpieces of our Society.

Ordinarily, the House of Delegates meets but once a year. It is true that they can be called together in extraordinary session. Emergencies do arise. Important matters come up, particularly in legislative years when the very fate of our profession is in the balance. The Council is elected, as you know, by caucuses from the various Councilor districts. We elect them as our representatives, we elect them as a Board of Trustees, the same as in a commercial institution or a corporation, or a Board of Directors, or a Board of Trustees must be elected to take care of the detailed work.

The Secretary, or the cashier, or the

executive officer in a bank is responsible to the Board of Directors, who, in turn, are responsible to the stockholders. We are the stockholders. We have elected a Board of Directors in whom we must have confidence or we would not have elected them.

I believe any change such as this is dangerous. As it is now, the membership has a much better control over the Secretary and Treasurer through the Board of Directors than we would otherwise have. I hope that the proposed amendment will not prevail.

Dr. Halsey: I can refute the arguments that have been advanced by the last two speakers by saying that further on in the Constitution we give the Council the power delegated to the House of Delegates when we are not in session.

Dr. Wenger: I move the previous question.

Speaker Pyle: The previous question has been moved. You have heard the substitution as offered in a motion by Dr. Denham, to change Section 5, Article 4, of the committee's report.

The motion was put to vote. There was a division.

A rising vote was taken with the following result: For, 19; opposed, 34.

Speaker Pyle: The substitute is lost.

Reading of Article 5, Section 1.

Dr. C. L. Candler (Wayne): I would like to suggest the following substitute:

"Section 1. The Council shall be the executive body of the Society; shall consist of the Councilors, the President, the President-Elect, the Secretary and the Treasurer of the Society. Eight of its members shall constitute a quorum. The President, the President-Elect, the Secretary and the Treasurer shall be ex-officio members and without the right to vote.

"Section 2. All the Council shall be responsible to the House of Delegates at all times for all of their acts."

Dr. Hume: A very important portion of this is left out. This is what is eliminated from Section 1: "The Council shall have the full authority and power of the House of Delegates between annual sessions, unless the House of Delegates shall be called into special session as provided for in the By-Laws."

That is the part that is eliminated in that motion. I think that is a very important elimination.

Speaker Pyle: Is there any further dis-

cussion on the motion? Is there a second to it?

Dr. Wenger: I will second that motion.

The motion was put to a vote and was lost.

Speaker Pyle: The chair declares the substitution lost.

Reading of Article 6, Section 1.

Dr. Curtis: I would like to move that we substitute the word "shall" for "may" in the first line.

The motion was seconded by Dr. Dutchess, put to a vote and carried.

Reading of Article 6, Sections 2, 3, 4 and 5.

Reading of Article 7, Section 1.

Dr. A. M. Moll (Kent): I would like to offer a substitution for Article 7, Section 1:

"Section 1. The Society shall hold an annual meeting at such time and place, and of such duration as the House of Delegates may determine. The session shall be open to all members who are in good standing and to invited guests."

I move the adoption of that.

The motion was seconded.

Dr. Dutchess: I view with alarm what appears to be a concerted attempt to hamstring the Council. I do not feel that it is wise. In such a simple thing as the selection of a place for the holding of the annual meeting it frequently becomes of practical importance to the Council to have the opportunity of consulting with the hotel men. This would make it difficult for any authority in the Society to do such things. I feel that it is unwise.

Dr. Corbus: This matter came up last year. Let me assure the House of Delegates that we want ever to be guided by the wishes of the House of Delegates on the place of the meetings. The only reason for keeping it, to some extent, in the hands of the Council is the very practical reason that sometimes a place will be elected in which they have no suitable hotel accommodations and no suitable place to hold the meetings. Then we are in trouble. For that reason the Council must have, or should have, it seems to us, a certain amount of liberty in the matter.

Again, not so infrequently it happens that the place that has been elected for the holding of the annual meeting is, when the time comes, unable to take care of us. There might have been a fire or something and you

have to make a change. The Council do not at all want to dictate as to where the annual meeting should be held under ordinary conditions, and I assure you we will follow your desires in the matter.

Dr. Candler: Speaking on the motion. There isn't any reason why the Council cannot find out that information before the House of Delegates meets in its annual meeting. If an emergency occurs, such as a hotel or city burning down, the Council is supposed to take care of that emergency.

What we are trying to do is not to hamstring the Council, but we are trying to assert our rights as the House of Delegates so that we should not have the authority of the State Medical Society in the pockets of the Council. If some of you think we are hamstringing them, we are going to try to do a good job of it today. (Laughter.)

President Brook: Regarding this matter of the place of the meeting: in years gone by the House of Delegates always designated the place for the meeting. If you will remember, in my address this morning I made a recommendation that invitations for holding the meeting be filed with the Council thirty days prior to the meeting of the House of Delegates and that the Council report to the House of Delegates as to accommodations for holding the meeting in the respective towns.

If that is done the Council still can say where you shall hold your meeting, but you shall select the place. It is your prerogative to select the place for holding the meeting, according to the Constitution. The other way you are allowed to select the place of meeting but you leave the back door open and you do not know whether you are going there or not. If things aren't just so the Council can say that you are going somewhere else. You really have nothing to say about it.

I am not with the Council on that particular proposition. I think this is a matter for the House of Delegates to decide.

Dr. Moll: I would like to add to my substitute the line "this power may be delegated to the Council."

Speaker Pyle: You have heard Dr. Moll's motion and the addition. Is there any further discussion?

Dr. Candler: I would like to bear out what the President has said in his annual address, that it be an addition to what we already have substituted, that the cities de-

siring the annual convention make their applications sixty days prior to this so that the Council can find out whether they have hotels and other facilities.

I would like to make that as an addition to the motion and also to thank the President for his remarks. (Laughter.)

Dr. Wenger: I support Dr. Candler in his motion to add what he has suggested.

President Brook: I would like to say again that just this year we have had an example of what might have happened. A year ago at Jackson we voted to come to St. Joe and Benton Harbor. At that time we had no definite information as to the accommodations. The Council didn't even know whether they could hold a meeting here until after the House of Delegates had long adjourned. Then a committee of the Council went down to look things over.

If it had been found that there wasn't adequate accommodations the Council would have said that we couldn't hold the meeting here and they would have had to designate some other place. Fortunately, it was all right. We are taken care of very nicely. That is just a recent instance.

If we have this investigation prior to our meeting everything will be smoothly taken care of. That is the method that is in force today in the American Medical Association. Another thing that it eliminates is the fact that you do not have to guess at hotel rates. You get definite hotel rates prior to the annual meeting and you know what you are voting on and what you are going to pay.

Speaker Pyle: Does everyone in the assembly understand the question and the motion?

Dr. Hirschman: Will the introducer of that amendment accept a slight change in the wording? Instead of the word "cities" will he say "county medical societies"? The invitation should come from the county medical societies.

Dr. Candler: Check and double check. (Laughter)

Speaker Pyle: That is incorporated in the motion then.

The motion, as changed, was put to a vote and was carried.

Reading of Article 7, Section 2.

Dr. Curtis: I would like to substitute, in the first line, the word "shall" for "may."

The motion was put to vote and carried, after being properly seconded.

Reading of Article 7, Section 3.

Dr. Curtis: Again I would like to substitute the word "shall" for "may" in the second line.

Speaker Pyle: May I ask the gentleman's object in making this substitution?

Dr. Curtis: If 250 men want a meeting of this Society they "shall" have it, not "may" have it.

Speaker Pyle: That is satisfactory.

The motion was seconded by Dr. Moll, put to vote and carried.

Dr. Moll: In the last line it says "not more than five petitioners shall come from one county society." I would like to substitute 15 in place of the five. It would make it difficult if you had five members from each county society to make a total of 30 delegates. You would have to confer with six county societies. They could not call a special session in a hurry otherwise.

The motion was seconded by Dr. Barone, put to a vote and carried.

Reading of Article 8, Section 1.

Dr. Barone: Further on in the Constitution or By-Laws they mention general officers. There is no provision in the Constitution for general officers. There is a dispute as to who the general officers are. I wonder if that could not be clarified at this time so as to make it read: "The general officers of this Society shall be a President, President-Elect, a Treasurer, a Secretary, an Editor" and then all of the other officers would be considered not as general officers. I would move that.

Dr. Curtis: I would move that that question be tabled until we come to Chapter 3, Section 7, Letter "m" of the By-Laws on Page 47, where it would come in.

Dr. Wenger: I support Dr. Curtis' motion.

Dr. Barone: I will withdraw the motion and bring it up at that time.

Reading of Article 8, Section 2.

Reading of Article 9, Sections 1, 2, 3 and 4.

Dr. Curtis: May I ask the Secretary if that is going to make it necessary for this body to fix the dues every year.

Secretary Warnshuis: The idea of that is that the old Constitution fixed the dues at \$10. If an emergency arose and it was necessary to change the dues you had to give notice this year and then you couldn't act on it until the next year. Now it is leaving the amount out and the House will undoubtedly, by resolution, fix the dues at \$10. That

will prevail until the House changes it. Then you do not have to amend your Constitution.

Reading of Article 10, Section 1.

Dr. Whitaker: In Article 10 the last paragraph of this Article reads, "A majority vote of all the members of the Society shall determine the question and be binding."

With a membership of 3,300 it is very difficult at all times to obtain a majority of all members of the Society. Therefore, I move that the following substitution be used:

"A majority of all the members at that session of the Society shall determine the question and be binding." Or you could say "present at that session."

The motion was seconded by Dr. Garner, put to a vote and carried.

Reading of Article 11, Section 1.

Reading of Article 12, Sections 1 and 2.

Dr. Dutchess: Regarding Section 2 where it says that the Constitution shall become effective immediately, I would like to ask if the old Constitution under which we are at present operating gives the authority to the House of Delegates to adopt a new Constitution immediately?

Dr. Warnshuis: Yes. The old Constitution gave the House of Delegates the authority to amend or modify the Constitution under these conditions, that on given notice of one year the Constitution could be amended or changed and by giving a notice of one meeting a By-Law may be changed. That notice was given a year ago and was published in the Journal on two occasions.

Speaker Pyle: If the chair may inject a little levity into this grave situation, it makes me think of the community that got together in New England. They had an old town hall. The younger generation wanted a new town hall. The old fogies, by a large majority, passed a resolution that the new town hall be built of the material from the old, but the old remain standing until the new one was built. (Laughter.)

Reading of Chapter 1, By-Laws, Sections 1 and 2.

Secretary Warnshuis: I might add for the information of the delegates that that section was recommended by the Judicial Council of the A. M. A. to all state organizations. They have found in their final hearings that some county societies, throughout the country, have quacks as members of the

society. There was no power in the state or in the A. M. A. constitution whereby they could exercise disciplinary influence over the county society. This section has been recommended by the Judicial Council of the A. M. A.

Reading of Chapter 1, Sections 3, 4 and 5.

Reading of Chapter 2, Sections 1, 2, 3 and 4.

Reading of Chapter 3, Sections 1, 2 and 3.

Dr. Hume: This seems to me unnecessary. At times it might be very inconvenient to disqualify a county society. I understand that the House of Delegates may be called into special session at any time during the recess of the Society. It happened today that a delegate of this Society was called home and the regularly-elected alternate is not here. If this was adopted the alternate would not be qualified to act. I think it is unnecessary and unwise.

I would move the elimination of that section.

The motion was seconded.

Dr. Barone: Mr. Speaker, those circumstances rarely occur where a man is called away by sickness or other things. Obviously, this is put in here to keep people from seating themselves at the morning session and then having someone else come in and substitute for them, someone who may think in a different way on certain matters than they do. As it stands is the best way. That is also in accordance with the old constitution.

Dr. Hume: I cannot agree with the gentleman's statement. He said this sort of thing did not occur often. It has occurred often. I think there is no reason why this should be here because it eliminates the rights of a county society to be heard in the proceedings of this body. Here they disfranchise the person who has been regularly elected according to our rules and regulations and do not allow them to be represented in the absence of that person.

Dr. Hirschman: I think we ought to be fair to the small societies. The small societies have one alternate and one delegate. If an emergency should arise the whole county is unrepresented for the rest of the meeting.

As far as differences of opinion are concerned, thank God that we do have differences of opinion. I think the county is entitled to representation and there should be some provision made so that the county can

be represented by a duly appointed or elected alternate who is here.

Dr. Gorsline: Could not a provision be inserted provided such an emergency arose so that the alternate might be seated by a vote of the House?

President Brook: This is a section which has two sides to it. It can be abused and it also can be made a hardship for the county society not to be represented.

The American Medical Association had a very hard and fast rule, practically the same as this one. No delegate who was once seated could be replaced but had to retain his seat throughout the entire session.

But, to give this a little leeway, if we change the word "or" in the first line on Page 46, and make it read "except his alternate," you will give his alternate the opportunity to sit in his place and then his society would be represented if he should be called for in an emergency or something of that kind. That would eliminate the excuse that might be brought up by a game of golf or something like that.

Dr. Gorsline: I believe that the House is the one to judge of the qualifications of its membership. I will restate my idea presented a moment ago, that provided we substitute the provision that in case of emergency the House shall be the judge of whether an alternate is to be seated or not.

Speaker Pyle: If you wish to make an amendment I trust the amendment will be stated clearly.

Dr. Wenger: I believe Dr. Gorsline's motion is a regular one. If there should be any collusion it would come out at that time. If the nomination were one made in good faith it would certainly carry the House. I support Dr. Gorsline's motion.

Dr. Gorsline: I will make that as an amendment to the original motion.

Speaker Pyle: State your amendment again and then I will have Dr. Hafford discuss it.

Dr. Gorsline: A delegate once seated shall remain a delegate throughout the entire session and his place shall not be taken by any other delegate or alternate, providing that in an emergency, upon a vote of the majority of the House of Delegates an alternate may be seated in his place.

Dr. Hafford: Suppose we cut out this suggestion that has been made by Dr. Hume, what happens to the alternate? Doesn't he

take the seat? He always has done it in the past, why do you have to mix that up.

Speaker Pyle: The chair believes that Dr. Hume in stating his motion said that his motion was to eliminate the paragraph entirely. Does Dr. Gorsline's motion take care of your thought in the matter?

Dr. Hume: Yes, I am very ready to accept it. This is all right as long as the object is accomplished. I think there are a great many things in there that are not necessary. Therefore, I will withdraw my motion.

Speaker Pyle: Then, Dr. Gorsline, will you make another motion to take care of this Section?

Dr. Gorsline: That Section 3 stand as printed with the addition of "provided that in case of emergency the House of Delegates may seat a duly accredited alternate."

Dr. Hirschman: I will add to that "from his county society," otherwise it would put in any alternate.

Dr. Gorsline: The delegate is accredited only by his county society. I said "duly accredited."

Dr. Hirschman: Then that is all right.

Dr. Dutchess: I will second Dr. Gorsline's motion.

Dr. Curtis: If you change that to "his duly accredited alternate" we will be all set.

Dr. Gorsline: That is all right.

The motion was put to vote and was carried.

Reading of Chapter 3, Sections 4 and 5.

Dr. Corbus: The Council directs me to suggest to you that instead of having a fixed number that you take a percentage, for the reason that our membership and our delegation varies from time to time.

The Council suggests that 40 per cent would be a proper number to use as a quorum. I will say that at this time we have accredited delegates in the number of 87. The Council suggests that this be changed to read:

"Section 5. A quorum shall be constituted from 40 per cent of the accredited delegates." That should be in place of the 30 delegates. Then continue: ". . . providing that the majority of such quorum shall not come from any one society."

The full section would read: "A quorum shall be constituted from 40 per cent of the accredited delegates, provided that the majority of such quorum shall not come from any one county society."

Dr. Barone: How would that fix it?

Dr. Corbus: There would be approximately 35 in a quorum as constituted, of which a majority would not be from any one society.

Dr. Denham: A little while back 30 delegates might be able to transact business. Is that not so? There is a provision for 30 delegates convening and transacting business in a special session. If you make your quorum larger than that those 30 cannot transact business.

Secretary Warnshuis: No. It only provides what you adopted in that section regarding meetings, and that a special session of the House shall be called on petition of 30 delegates, but that a quorum under this provision must be 40 per cent of the accredited delegates. Thirty delegates can call a special session of the house, they can petition for a special session.

Dr. Garber: That section was amended to make it 5 and not more than 15 petitioners coming from one city. That conflicts, doesn't it?

Secretary Warnshuis: That is for the call of the meeting.

Dr. Garber: Suppose it is one of those 30 that calls it. Suppose you had a consistent vote of those members?

Secretary Warnshuis: They couldn't meet because you couldn't get a quorum.

Dr. C. E. Toshach (Saginaw): I move that we make this read as Dr. Corbus suggested.

The motion was seconded.

Dr. J. R. Rupp (Wayne): I object to the last addition that at no time should the quorum consist of 30 members of any one county. I do not think there is adequate provision made for the large societies, such as Wayne, to be adequately protected. At times there might be 30 members present from that section, they would be up there, and you would have a quorum, 40 per cent of your House of Delegates, but because 30 of them were from Wayne you couldn't function. There should be a provision made for cutting up that society if you are going to put this in.

Dr. Hume: I will admit that there might not be the amount of protection for the Wayne delegation, or for Wayne County, that there ought to be, but I think it is a necessary thing that there be protection for the other counties out in the state from Wayne. (Applause and laughter.)

Dr. Garner: I think this is a question of vital importance. We may get into a bad mixup over it. I think we ought to settle it in such a manner that there will be no possibility of functioning only at certain times. Fix it any way you wish but fix it so we won't be embarrassed. I think we ought to be very careful on this point.

The motion before the house was put to a vote and was lost.

Dr. Toshach: I ask for a rising vote on that.

Dr. Hume: What was the motion?

Secretary Warnshuis: The motion was to accept Dr. Corbus' substitute, that being the recommendation of the Council.

Dr. Corbus: That "A quorum shall be constituted from 40 per cent of the accredited delegates." We have 87 at the moment. "Providing that a majority of such quorum shall not come from any one society." That is "county society."

A rising vote was taken as follows:

In favor: 36.

Opposed: 19.

Speaker Pyle: The motion is carried.

Dr. Dutchess: I move that this motion be reconsidered.

I wish to point out that if there had been three or four delegates less from the state outside of Wayne County last year we wouldn't have been able to have a meeting at all.

Speaker Pyle: I think that a motion to reconsider cannot be brought up until some other business has been transacted.

Dr. Rupp: I think we should have a roll call at once. If that motion is carried we won't be able to function now. I believe Wayne has a majority right now.

Speaker Pyle: The chair has asked for a rising vote. We have counted that rising vote. You have the right to reconsider, there is always that possibility. But, the chair is of the opinion that you cannot reconsider a motion immediately after it has been stated and voted upon.

Dr. Rupp: I beg to insist that I am not trying to reconsider the motion. I am considering our present status. If that is adopted the question is whether we can function now. Maybe that doesn't have to come up for consideration until the Constitution is adopted. I am warning you if that should happen right now we couldn't continue.

Speaker Pyle: The suggestion is very well taken, but you cannot reconsider a mo-

tion immediately after you have voted on it. You will have ample time to take it up elsewhere.

Dr. Curtis: I would like to ask how many delegates are accredited to the House at this time?

Secretary Warnshuis: The last number that the chairman of the Credentials Committee has given me was 61.

Speaker Pyle: I believe this can be reconsidered but I do not believe it can be reconsidered immediately after it has been voted upon.

Dr. Himmelhoch: I believe we called for a roll call on that last vote.

Dr. Wenger: A point of order. The consideration of this question is only a part of the Constitution. It isn't the adoption of the Constitution. That will have to be voted on as a whole when we are through.

Secretary Warnshuis: To reconsider a question and enter it on the minutes can be made at any time by one who voted with the prevailing side. It must be seconded. Thus it requires only two members to put it before the house. It can be applied only to votes that dispose of the main question and it cannot be called up on the same day it was made. It instantly stops all proceedings or discussion of that question.

Dr. Himmelhoch: Can't I call for a roll call on that vote?

Dr. Wenger: He is out of order.

Speaker Pyle: We had a rising vote and a big majority voted in the affirmative. I cannot see the gentleman's object in calling for a ballot vote.

Dr. Himmelhoch: Have it anyway.

Speaker Pyle: We will give you the floor if you want to reconsider a motion.

Dr. Dutchess: Since making my motion I have talked to Dr. Corbus and I find that the provision was that it should not be a majority of the accredited delegates, not a majority of those present. In view of that understanding I withdraw my motion.

Reading of Chapter 3, Sections 6 and 7, a, b, c, d, e, f, g, h, i, j, k, l, m.

Dr. Curtis: I would like to amend this section to read, following the word "society" in the fifth line, "hereby defined as the President, President-Elect, Secretary and Treasurer."

Dr. Wenger: I support Dr. Curtis' addition.

Dr. Curtis: That will then read, "No delegate shall be eligible for election to the

general offices of the Society, hereby defined as the President, President-Elect, Secretary and Treasurer," and then go on with the balance of the sentence.

The motion was put to a vote and carried.

Reading of Section 7, n and o, Chapter 3.

Reading of Chapter 4, Sections 1 and 2.

Dr. Philip Riley (Jackson): I would like to offer a substitution for that section. "The President-Elect shall be a member of the Council ex-officio, and shall act for the President in his absence or disability. If the office of President should become vacant the President-Elect shall succeed to the Presidency. If the office of the President should again become vacant the Council shall elect a President for the unexpired term."

The motion was seconded by *Dr. Denham*, put to vote and carried.

Reading of Chapter 4, Sections 3 and 4.

Dr. Riley: Under Subdivision 10 make an addition there "approved by the House of Delegates."

The motion was seconded by *Dr. McIntyre*, put to a vote and carried.

Dr. Toshach: Considering all of these duties of the Secretary and considering the fact that he collects and disburses the money and practically takes care of the money, I really cannot see why we should have a treasurer and go to the expense of bonding another man to put the money into the bank. Apparently, he does nothing else.

Secretary Warnshuis: The treasurer does hold the invested bonds of the Society and by action of the Council the Treasurer, together with the chairman of the Finance Committee of the Society, and the chairman of the Council, determines what bonds are to be invested in. Their judgment determines the nature of investments.

Reading of Chapter 5, Section 1.

Dr. Dutchess: I would like to ask if that isn't in conflict with the clauses we had earlier which speaks of the Council having its annual meeting in January?

Secretary Warnshuis: No, it doesn't speak of the annual meeting. It says that the Secretary and the Editor and Treasurer shall be elected at the annual meeting in January. They have a mid-annual meeting in January and their annual meeting is at the time of the state meeting.

Reading of Chapter 5, Sections 2, 3, 4, 5, 6, 7, 8, 9 and 10.

Reading of Chapter 6, Section 1.

Dr. W. E. Wilson (Kent): I offer a substitution for Section 1.

"Section 1. The following standing committees shall be appointed by the President with the advice of the Council:

a. Committee on Legislation.

b. Committee on Civic and Industrial Relations.

c. Joint Committee on Public Health Education."

I move the adoption of that substitute.

Dr. Hume: Does that leave out the Medico-Legal Committee; is that the idea?

Speaker Pyle: That is the way the chairman understands it.

Dr. Hume: I think we should understand that that is eliminating the Medico-Legal Committee as appointed by the President.

Dr. Wenger: That is already provided for in another part of the Constitution.

Dr. Hume: Where?

Dr. Barone: Chapter 5, Section 8.

The motion was seconded by *Dr. Wenger*, put to a vote and carried.

Reading of Chapter 6, Section 2.

Dr. Wilson: I move a substitution in Section 2, to read:

"The Committee on Legislation shall consist of five members appointed by the President each year with the advice of the Council."

Dr. Hasley: I second the motion.

Speaker Pyle: That is substituting the word "advice" for "approval."

The motion was put to a vote and carried.

Reading of Chapter 6, Section 3.

Dr. F. T. Andrews (Kalamazoo): I would like to amend this section by saying that the same Industrial Commission be re-appointed for the following year.

Secretary Warnshuis: You don't want to put that in the By-Laws. That then makes it mandatory.

Dr. Candler: I claim that that last motion is irrelevant, immaterial and out of order. (Laughter.)

Dr. LeFevre: The Council wishes to make a suggestion that Chapter 6, Section 3, read that "standing committees be abolished and that authority be given the President, by and with the advice of the Council, to appoint such committees as the interest and the need of the Society indicates, and that such committees serve until their work has been completed, at which time they are to be discharged."

Dr. Hume: I move that this body adopt the recommendation of the Council as presented by Dr. LeFevre.

Dr. Garner: I second the motion.

President Brook: I believe Dr. Wilson introduced an amendment to Section 1. By adopting this recommendation of the Council you will automatically eliminate Section 1 of this Chapter.

The motion was put to a vote but the result was in doubt.

Dr. LeFevre re-read the amendment.

Dr. Candler: On the motion. We had a little discussion sometime earlier in the afternoon about hamstringing the Council. I do not like to use that word, but I would like to see the President have enough authority to appoint some committees and not have to be hamstrung, like he has been in the past, and have to hold only an honorary job.

Wayne County may be accused of trying to run a steam roller through here this afternoon. But, we have no ax to grind and we are not looking for personal aggrandizement. We have come down here fighting for representation on this Council. We have been having taxation without representation for about ten years or more. We want to see the President have enough authority to appoint his own committees. He can consult with the Council and take their advice but he must not be in the position of making his appointments and then having the Council say, "You are not a nice boy; you cannot do that."

Speaker Pyle: Is there any further discussion on the motion? Gentlemen, the question is now on the adoption of the recommendation of the Council.

The motion was put to a vote and was lost.

Speaker Pyle: I declare the motion lost.
Reading of Chapter 6, Section 4.

Secretary Warnshuis: I would advise the House of Delegates that this section is the same as the Medico-Legal work that has been conducted in the past under the old Constitution.

Speaker Pyle: Do you wish to have that read?

No one desired a reading.

Reading of Chapter 7.

Reading of Chapter 8, Section 1.

Dr. Curtis: That conflicts with your statement that the House of Delegates were going to fix the annual dues.

Secretary Warnshuis: It does not conflict with the House of Delegates fixing the annual dues. The House of Delegates can amend the By-Laws at any session.

Dr. Curtis: At the end of one year.

Secretary Warnshuis: That is the Constitution.

Dr. Curtis: Your previous article called for the House of Delegates fixing the annual dues. Now you start to fix it all over again.

Secretary Warnshuis: The House of Delegates can amend the By-Laws at any session. Before the amount was specified in the Constitution. It has been shifted from the Constitution to the By-Laws.

Reading of Chapter 8, Sections 2 and 3.

Reading of Chapter 9, Sections 1, 2, 3, 4 and 5.

Dr. C. T. Eklund (Oakland): It seems to me that that works an injustice on the county societies that border on large centers of population. I would like to submit the following as a substitute for that section:

"A physician living near a county line must hold membership in his own county society, but may, for his own convenience, hold associate membership in a neighboring county society."

Dr. Curtis: I will support that.

Dr. T. P. Treynor (Mecosta): An attitude such as that may be all right for the territories that are near large centers but it is going to work a hardship on the smaller counties. They will object very, very strenuously to any change in that particular ruling.

Dr. Hume: Do I understand that this section is to be left as it is with this addition?

Dr. Eklund: It is a substitute.

Dr. Hume: That takes away from the doctor the right to go into the society that is most convenient, or where he wishes to go. As it is now if the Councilors of the two districts agree he can go and he can pay his dues and become a member of the society that he wishes to belong to and which is most convenient for him. Under your resolution he would still be paying paying dues to the society in which county he was. I do not think that it is wise.

Dr. Eklund: The trouble is that as at present constituted Oakland, Macomb and Wayne all belong to the same Councilor district. The Councilor is a Detroit man.

Dr. Barone: If it is going to affect anybody at all as it is written it is going to affect Wayne more than anybody else. Oakland has a perfect right to its members. It is not depriving the Oakland man from coming to the Wayne Society meetings, however. If they want to become associate members of our county we are glad to take them in. And even if they are not members of our society, if they want to attend the meetings we do not kick them out.

Dr. Hume: That may be all right with Wayne and Oakland Counties but it isn't so with Shiawassee and Saginaw. There are physicians who reside in Saginaw County who are much nearer to Owosso and would much prefer to become members of that society and are members of that society. That has been arranged between the Councilor of the district north of us and our Councilor.

If you take away that right then our members must pay their dues in Saginaw County even though they may wish to pay them in Shiawassee. I am perfectly willing to accept that as an addition if you will leave the rest as it is.

Dr. Toshach: The Councilor from the district Dr. Hume comes from has already given consent that the men in that section may belong to the Owosso Society.

Speaker Pyle: Is there any further discussion?

The motion was put to a vote and carried.

Reading of Chapter 9, Sections 6 and 7.

Dr. Connelly: I offer as a substitute for Chapter 9, Section 7, the following:

"At the annual meeting of each county society, or at a designated meeting, of which ample notice has been given, each county society shall elect delegates, or alternate delegates, in conformity with the provision of this Constitution and By-Laws to represent the county society in the House of Delegates of this Society. Their term of office shall be two years."

My purpose in offering the two years is that a delegate for one year has practically no knowledge of what is going on. A man should have at least two years in the House to be able to work efficiently.

Dr. Barone: I will second that motion.

But, I would like to suggest to Dr. Connelly that each county society elect delegates

and alternate delegates instead of having that "or" in there.

Dr. Connelly: I will accept the correction.

Dr. Hirschman: You cannot elect delegates annually to serve two years.

Dr. Connelly: Certainly you can. You do not have to elect all of your delegates each year. You elect part of them one year and part of them the next year.

Dr. Wenger: We elect annually.

Dr. Curtis: Dr. Barone's amendment meant to elect annually.

Dr. Barone: I said "and" instead of "or."

President Brook: I think that plan has some drawbacks to it. In the first place, you are dictating to the county society as to how long the delegate should serve. In the second place you have the man on your hands for two years if he turns out to be a dub.

That circumstance exists in Kent County today. I do not say that we have dubs there. But, we have one man who is not here and neither is the alternate for him here. If they were elected for two years don't you see you would still have them on your hands as delegates?

I think that is a matter that should be left to the County Society.

Dr. Wenger: Even if you elect them annually you designate how long they should be elected. We elect our Councilors for five years. If we get a dub we have just as bad a dub there as if we would get a bad delegate.

We hope that the county society is a fairly good judge of what they are going to send to the House of Delegates. If they fall down once in awhile you cannot expect anything else. But, as a general thing they elect fairly good delegates. We believe that they would receive better service from their delegates if they elected them for two years.

The motion was put to vote. The result was in doubt.

The rising vote was as follows:

In favor: 22

Opposed: 28

Speaker Pyle: The motion is lost.

Dr. Barone: I want to bring up the same point that I made regarding the amendment, that is that the "or" be changed to "and." That means that you elect the delegates and alternate delegates too. We want to elect both of them at the same time.

Secretary Warnshuis: That is a grammatical error and can be readily changed.

Dr. Garber: I would like to ask if Section 5 was voted on while everybody was clear on it. I do not think everybody knew just what they were voting on. There was so much discussion that I am under the impression the question was voted on without a clear understanding.

As I understand it, it compels these men who are now members of Dr. Hume's county medical society to go back to Saginaw. There was so much discussion that I do not think some of us knew just what was meant.

I would like to move a reconsideration with a restatement of just exactly what is meant by the new motion, as to whether the men living near a county line must resign their membership in the society nearest to them and go back to another place, or whether they may go back to the society nearest to them.

Speaker Pyle: The gentleman has voted on the prevailing side and wishes some more discussion on Section 5, Page 53.

Dr. Garner: It looks to me as though this may be possible. It seems to me that it is the best thing in the world to keep up the enthusiasm and the interest in all of the societies. If a man is living near a boundary line and he can attend a certain society and he finds the time to get over there, he is a good, active member and will give not only of his time but probably some papers, too, all of that will help.

On the other hand, maybe he is living in a district that puts him miles away from his county society and so he loses his enthusiasm and his interest and if he is forced to do this he may not go to either and you have really lost a valuable member for both.

I feel that in these rural districts we should be a little lenient because it isn't always an easy thing to keep up the enthusiasm. A good membership and a lot of interest is what the societies need more than anything else. If we can keep up that interest I believe it will add more to our society as a whole than it would if we took the chance of losing a lot of the fellows who could not go such a long distance. I think we ought to give that careful consideration.

Dr. Barone: I do not see where anybody would lose enthusiasm in a certain county society simply because he could not be a

member of that society. I do not see why a county society cannot have another man come in and listen in on their deliberations.

I can see a county society with six members wanting another member to help carry the expenses of that county society. The hardship at the present time is in those small cities, or counties, surrounding the large ones. I am from one of the large county societies. However, I am not trying to keep that man from going to Oakland and paying his \$20 dues there, if that is what they charge.

Dr. Eklund: It seems to me that the strength of organized medicine depends on the county society. If we do have those strips that are weak, that bound big cities like Detroit, they become noticeably weakened by a migration of the men into Detroit and the other big cities.

We have no objection to having them go in. In fact, many of us from Oakland go into those places frequently. We have been met with a great deal of courtesy and friendliness. Our own organization permits of associate memberships in the organization. We have men who belong regularly to Wayne who are associate members in our county and who reside in Oakland County. I do not see why the same thing could not be made to work both ways.

It seems to me logical that a man should belong to the county society in which he lives and works and has his practice, the place where he makes his living. Any associations that he may want to make outside for his own convenience certainly can be taken care of by whatever mechanism is in use in that society.

Dr. Treynor: Apparently you lose sight of the fact that associations of the smaller societies particularly are not dependent on county lines any more than they are dependent on county lines around Detroit. The men who live close to some of these county lines in the outlying districts are far away from any medical center in the county in which they reside.

In our own county it is going to lose to us two of our very best members. It is not only going to lose them to us but I know that they will not be able to affiliate themselves actively with their own county society. Distances and road conditions make it impossible to do other than they have been doing in the past. They can under-

stand that in Oakland County because they are having the same trouble there.

Dr. Hume: The situation in Oakland and Wayne Counties is not the situation that we have outside. For instance, these members that the Shiawassee County Medical Society has reside just over the border in Saginaw County. They reside much nearer to Owosso than they do to Saginaw. About four-fifths of their business is in Shiawassee County. They ask the privilege of becoming members of the Shiawassee County Medical Society. They were released by the Saginaw Medical Society so that they could do that.

The question that come up before was the question that was before the Society for years until the present arrangement was made, which gave the doctor himself the right to choose the place where he wanted to go and the society with which it was most convenient for him to associate.

There is no reason why that arrangement should not stand. It has been gone over and over again. A very fine adjustment was made. The Councilor of our county and the Councilor of Saginaw County agreed between themselves that this was a reasonable thing to do so that these people were allowed to come over into our county.

The only thing we are asking is that this be left as it is. If you want to add something to it that would favor you in Wayne County and in Oakland County we have no objection to that. However, the substitution blots this out and we are back where those men will be compelled to leave our county society. And they won't go to Saginaw because it is too far for them to go.

Dr. Candler: A point of order. Is there a motion before the house?

Speaker Pyle: No.

Dr. Candler: I move we reconsider the action on Section 5, Chapter 9, for the benefit of the small counties having these difficulties.

Dr. Garber: I second the motion.

Dr. Wenger: I would like to offer an addition to the section to the effect that any county society wishing to arrange for associate members among those who live close to the border, in order to arrange for its members to be in the county, may so arrange. That should be left to the vote of the people concerned in the matter.

Dr. Eklund: I want to point out that the

modification as I read it provides for that very thing, "but may for his own convenience hold associate membership in a neighboring county society."

Dr. Hume: I am speaking about actual membership and not associate membership. It isn't an associate membership that he needs. What this man wants is an actual membership in the county in which his interests are, where the hospital in which he works is located. He wants to be an actual member. That is arranged for in the present arrangement.

Dr. Henry Cook (Flint): I would like to relate one or two experiences which I have had as Councilor of the district. I think it might present the situation to you as it has arisen.

I have in mind one man from Clinton County who wished to transfer to Shiawassee County. The situation was that he did his work in a hospital in Owosso. I took up the matter with Clinton County. They were willing because he did not attend Clinton County Society meetings. And they said the man would not attend unless he was a member in Shiawassee County. I have watched the matter and he does attend in Shiawassee County now that he is a member. That merits some consideration.

I have in mind a man who wished to join Genesee County. He was from Oakland County. There was no other legitimate reason except that he interned in a hospital in Flint and he knew more of the men there. I did not feel that that was a legitimate reason. After becoming acquainted better in Oakland County he would attend better in Oakland.

There are certain men, such as the man in Clinton County, and other men in that county, who have become affiliated. I feel it is a matter that the man should have some right in, as to where he will function better as a county and state society member. You should give it consideration.

Dr. Garber: I understand this is up for reconsideration.

Dr. Candler: I move that we restore this Section 5 to the way it is printed in the pamphlet.

The motion was seconded by Dr. Garber, put to vote and carried.

Reading of Chapter 9, Sections 8 and 9.
Reading of Chapter 10.

Dr. Hirschman: I move the adoption of the Constitution and By-Laws as amended.

The motion was seconded by Dr. Gorsline, put to a vote and carried.

Secretary Warnshuis: Under unfinished business Dr. Whitaker has sent the following to the desk.

(Secretary Warnshuis read Dr. Whitaker's offering.)

Dr. Brosius just called from Detroit and read the following paragraph from the community fund news, September issue. He asked that you present this to the House of Delegates and see what action it wishes to take:

"For months after the return of prosperity, our clinics will be flooded with patients who will be unable to pay for even part of the cost of this service. In the first place, they must get caught up with their debts for necessities, rent, fuel, food, and they must lay in a supply of clothing so as to present a decent appearance at work. Only after these other matters have been attended to will they be able to pay for medical care. Accordingly our clinics will be called upon for a larger service with less revenue from earnings, which means an increase in the budget."

Speaker Pyle: We will refer that to the Business Committee.

Is there anything under the heading of unfinished business? We will take up the matter of group insurance under this head. Dr. LeFevre.

Dr. LeFevre: I realize that this committee was appointed two years ago. Apparently, as far as the House of Delegates is concerned, it has not had any report. There are a good many reasons for that.

In the first year I had about all the trouble I could handle of my own. On top of that I went to Europe so I could forget some of it and came back only to be taken sick. I was taken to the hospital for quite a long time. Thank God I am here with you today and on the job.

We have never called this committee together. We have had some talks individually but we really had nothing to bring in a concrete form. When I was appointed I immediately got in touch with a number of insurance companies. That is, the New York Life, the Travelers, the Equitable, the Metropolitan and the Mutual Benefit, which I consider probably some of the best that

there are. We also got a letter from the Michigan Insurance Company, that is Groesbeck's organization. They were willing to figure on it.

I asked them to give me a tentative plan on how this thing could be worked out. Two of the insurance companies came through with this suggestion, that they would take in all the doctors at a certain age, providing that the Secretary of the State Society would collect the premiums.

Then hard times came on. I talked with a number of doctors as I happened to meet them. I didn't get very much encouragement in the way of their willingness to take out insurance at this time. I consider this a very important question. It is important in a good many ways. It involves a little increased expenditure for belonging to this Society which the individual gets no benefit for himself. I mean by that that it will go to the Society as an endowment fund. It will make more money for you to pay.

A lot of you know as well as I do that a good many doctors in the state are having a little trouble paying dues to the Society. If you add another figure to that it is going to be a great deal harder to meet the figure.

Another thing, I could not get the insurance companies to give me any definite figures on how much this would cost. The plan that I proposed was to take all the doctors in, without any examination, at a flat rate. I thought that the old men would live long enough to sort of over-balance the few that might drop off accidentally.

This committee is composed of Dr. Bernard, Dr. McCune, Evan Rich and myself. I will guarantee if you will be a little patient with us that by next year we will be able to give you something more concrete to work on. It will be more in accord with the conditions of the times. I do not think that at the present time it is feasible to put this thing over and still do it properly. I think it will take another year. If the House of Delegates is willing to continue this committee for another year we will be pleased.

Speaker Pyle: This morning your Speaker was instructed to appoint a committee to take up the matter of establishing a section in our Society on Dermatology. As that committee I appointed three. They were:

Dr. C. K. Valade, Chairman

Dr. Hasley

Dr. Wenger

We will listen to Dr. Valade's report.

Dr. Valade presented his prepared report.

Mr. Speaker and Delegates of the House of Delegates:

The members of your special committee appointed to investigate the advisability of forming a section on Dermatology and Syphilology beg to report that we feel there is a need for such a section to round out the scientific program of the Michigan State Medical Society.

Further points showing the importance of such a section are as follows:

1. There are over fifty members of the State Society that have acknowledged their active interest in diseases of the skin and are listed as dermatologists in the American Medical Directory.

2. We have in the Detroit Dermatological Society thirty-five active members. The membership of this Society is not limited to Detroit. There are three members from Ann Arbor, one from Lansing, one associate member from Grand Rapids and one from Jackson.

3. The members of the Michigan State Medical Society at present have no means of sitting in and discussing diseases of the skin nor new methods of diagnosing and new treatments for syphilis except at the annual meetings of the A. M. A. Because of the distance to many of the meeting places of the A. M. A., the majority of our fellow practitioners are unable to attend.

4. No less than twenty-five general practitioners have asked us why we do not form a section so that they might keep abreast of the new treatments for diseases of the skin. From 15 to 25 per cent of their patients are dermatological cases.

5. Realizing the growing importance in the diagnosis and treatment of diseases of the skin and syphilis, we, the dermatologists of the Michigan State Medical Society, will do our utmost to furnish interesting and instructive papers for this section.

6. Further we are willing to devote this time to the service of Medicine and the practitioners thereof.

7. This new section of Dermatology and Syphilology should only take one day, so that all members of the Michigan State Medical Society may attend the general meeting.

Dr. Valade also read two letters.

Sept. 13, 1930.

Cyril K. Valade, M.D., Pres.,
Detroit Dermatological Society,
1604 Eaton Tower,
Detroit, Michigan.

My dear Dr. Valade:

The studies and activities of the Detroit Dermatological Society, embracing within its membership dermatologists of the larger cities of Michigan and Toledo, Ohio, have shown the interest of the profession as a whole in problems associated with dermatological and syphilological pathology. The importance of the recognition of these lesions in the diagnosis of diseases in general and the now known but formerly unsuspected relationship of syphilis as the causative factor in many obscure diseases, the great advances during the last two decades in diagnosis and treatment, not the least in the field of syphilis, have clearly demonstrated the need of this interest. I believe, therefore, that the physicians of the State would welcome a more elaborate study and discussion of these subjects and would approve the creation of a Section on Dermatology and Syphilis within the Michigan State Medical Society and would attend its deliberations. I would, therefore, urge that, if it meets with your approval, you present such a plan to the House of the Delegates at the meeting of the House next week and urge its adoption.

Yours sincerely,

Andrew P. Biddle.

September 12, 1930.

Dr. Cyril K. Valade,
1604 Eaton Tower,
Detroit, Michigan.

Dear Dr. Valade:

I understand there is a movement on foot to establish a section on Dermatology and Syphilology in the State Medical Society.

While I believe that for us who are practicing our special field there are probably adequate societies now in existence, it is probably true that there is no place where the practitioners of the state can hear discussed matters pertaining to cutaneous medicine and to syphilis.

For this reason, I think the establishment of a section on Dermatology and Syphilology in the State Medical Society would be timely and well deserving of favorable con-

sideration by the house of delegates and the council.

With kind regards.

Sincerely yours,
U. J. Wile, M.D.

Dr. McKean: I move the establishment of a section on Dermatology and Syphilology.

The motion was seconded by Dr. Hasley, put to vote and carried.

Speaker Pyle: Is there any other unfinished business?

COUNCILOR RE-DISTRICTING

Dr. Barone: The question that I want to bring up is the matter of re-districting the Society. It seems as though the delegates elected to the State Society from the county societies are more or less according to the way we elect state senators in the United States Government. That is, if we have a small county society we give them one representative in the House of Delegates. Where there is a larger society we have no more than one delegate for every 50, or major fraction thereof.

When we come to the Councilor districts of the Society we find they are divided somewhat in the same manner, with the exception that in an arbitrary geographical distribution they have tried to divide it so that there may be three or more counties in one Councilor district.

According to the number of delegates allowed for each county society, and according to the number of members from Wayne County in the Michigan State Medical Society, we should be allowed 41 per cent of the delegates. However, as things are now we are allowed 28 per cent of the delegates.

Since there is a discrepancy and since it is an arbitrary geographical distribution that prevails in the way the Councilor districts are divided, I thought that at this time it would be a good plan to divide the first Councilor district, which comprises Wayne, Oakland and Macomb Counties, into three districts; Wayne County to be divided into two districts. This division should be by Woodward Avenue, making Wayne into East and West Wayne, and Macomb and Oakland be given a district of their own.

I so move you.

The motion was seconded by Dr. Eklund, put to vote and carried.

Dr. Riley: I would like to know what the duties of the Nominating Committee are.

Speaker Pyle: The way I understand it, the adoption of this new Constitution—and the chair will accept information to the contrary—abolishes the Nominating Committee. If I am wrong on that I will be glad to have contrary information.

Dr. Riley: We thought we were out of a job but we wanted to be sure.

Speaker Pyle: Thank you for serving so well. (Laughter.)

Dr. Connelly: Then this evening we will elect new Councilors from Wayne County and Oakland County, is that correct?

Secretary Warnshuis: It will also be in order for the counties, or the districts, constituting a Councilor district to call their delegates together and nominate their Councilors, making their nominations in their own districts.

Dr. Candler: Just a point of information. Is there any reason why this annual meeting cannot be held a week later in the year? My reason for bringing that up is that the American Society of Obstetrics and Gynecology meets this same week. There are several members of the State Society who cannot come here because of the conflict in dates.

Speaker Pyle: That is good as a suggestion, but that is up to the House of Delegates.

Secretary Warnshuis: I will say that the date of the meeting is practically always dependent upon convention arrangements in the city where it is to be held. We couldn't meet here next week because there is another convention here. There is also another convention the week after that. This was their only vacant time. Local conditions in the county holding the convention have usually suggested the time of the year when the convention has been held.

Speaker Pyle: Is there any other business? The chair is of the opinion that this is the last chance for new business except by unanimous consent this evening. Is there any new business? If not, we will recess until this evening.

The House recessed at five forty-five o'clock.

MONDAY EVENING SESSION

September 15, 1930

The meeting convened at eight o'clock, Speaker Pyle presiding.

Speaker Pyle: We will now have the roll call.

Secretary Warnshuis: I have handed to the official stenographer the roll call of the signed attendance for this session and move you that that constitute the roll call of the House for this evening's session.

The motion was seconded by Dr. Hume, put to vote and carried.

The signed roll call was as follows:

Bay-Arenac-Iosco: H. P. Lawrence, Bay City.
 Berrien County: W. C. Ellet, Benton Harbor.
 Branch County: A. G. Holbrook, Coldwater.
 Calhoun County: C. S. Gorsline, Battle Creek; George Hafford, Albion.
 Cass County: W. C. McCutcheon, Cassopolis.
 Clinton County: W. A. Scott, St. Johns.
 Genesee County: J. T. Connell, Flint; G. J. Curry, Flint; M. S. Knapp, Genesee.
 Gogebic County: W. E. Tew, Bessemer.
 Ingham County: L. G. Christian, Lansing; J. Earl McIntyre, Lansing.
 Jackson County: Philip Riley, Jackson; J. J. O'Meara, Jackson.
 Kalamazoo-Van Buren-Allegan: F. T. Andrews, Kalamazoo; F. C. Penoyer, South Haven.
 Kent County: A. M. Moll, Grand Rapids; A. V. Wenger, Grand Rapids; William E. Wilson, Grand Rapids.
 Luce County: H. E. Perry.
 Macomb County: J. E. Curlett, Roseville.
 Manistee County: A. A. McKay, Manistee.
 Marquette-Alger: V. H. Vandeventer, Ishpeming.
 Mason County: L. W. Switzer, Ludington.
 Mecosta-Osceola: T. P. Treynor, Big Rapids.
 Muskegon County: F. W. Garber, Muskegon.
 Oakland County: C. T. Eklund, Pontiac; F. A. Mercer, Pontiac.
 O-M-C-O-R-O: C. R. Keyport, Grayling.
 Saginaw County: C. E. Toshach, Saginaw.
 Shiawassee County: A. M. Hume.
 St. Clair County: A. L. Callery.
 St. Joseph County: C. G. Morris, Three Rivers.
 Washtenaw County: J. A. Wessinger, Ann Arbor.
 Wayne County: A. U. Axelson, Detroit; C. J. Barone, Detroit; A. S. Brunk, Detroit; C. L. Candler, Detroit; J. L. Chester, Detroit; N. E. Clarke, Detroit; B. L. Connelly, Detroit; J. D. Curtis, Detroit; C. E. Dutchess, Detroit; B. U. Estabrook, Detroit; H. B. Garner, Detroit; L. O. Geib, Detroit; C. K. Hasley, Detroit; L. T. Henderson, Detroit; A. J. Himmelhoch, Detroit; L. J. Hirschman, Detroit; Frank Kilroy, Detroit; Charles Lakoff, Detroit; H. A. Luce, Detroit; R. M. McKean, Detroit; G. C. Penberthy, Detroit; J. R. Rupp, Detroit; A. H. Whitaker, Detroit.

Speaker Pyle: We will now have the report of the Credentials Committee, Dr. Penoyer.

Dr. Penoyer: I have no further report to make except to say that Dr. A. S. Brunk of Wayne registered this evening, making 62 delegates seated.

Speaker Pyle: In that event, if there are no objections we will consider this the roll call of the House. Are there any objections?

The next order of business is the report of the Business Committee, Dr. McKean.

Dr. McKean: We have no report except on the correspondence from Dr. Brosius regarding the statement made by Dr. Norton of Detroit. It was our feeling that this had best be handled by the Civic and Industrial Relations Committee and we so recommend.

Dr. J. A. Wessinger (Washtenaw): I move that be done.

The motion was seconded by Dr. Gorsline and put to vote and carried.

Cancer Committee

Speaker Pyle: This morning your speaker was empowered to appoint a committee consisting of ten to establish a permanent Cancer Committee of the Michigan State Medical Society to study the prevalence and mortality of cancer and to take such steps as may seem feasible towards its elimination as a menace and to do all in its power to further the prevention of cancer, its early diagnosis and treatment.

As that committee I wish to appoint:

Dr. Dutchess, Wayne, for five years.

B. F. Morse, Wayne, three years.

C. S. Kennedy, Wayne, one year.

Dr. Collinger, Washtenaw, four years.

Carl Weller, Washtenaw, one year.

Richard R. Smith, five years.

A. W. Crane, Kalamazoo, two years.

T. P. Treynor, Mecosta, two years.

Dr. Suffick, Traverse City, three years.

George L. Bond, Kent, four years.

The next order of business is the election of the President. We will entertain nominations for President.

Election of President

Dr. Hirschman: I wish to place in nomination for the office of President a man worthy of the place. There has always been a feeling on the part of most of the House of Delegates that good service should be rewarded. A good servant should receive recognition and promotion.

I am not going to take my two minutes to place in nomination a man who for the last ten years has been a good servant and as a member of the Council has acted as its chairman. The gentleman to whom I have reference will be an ornament to the profession and a very efficient President of the Michigan State Medical Society.

I take pleasure in presenting the name of Dr. R. C. Stone of Battle Creek. (Applause.)

Dr. G. J. Curry (Flint): For the same reason that Dr. Hirschman gave, on behalf of the delegates of Genesee County I wish to support the nomination of Dr. Ray Stone, of Battle Creek, for President of Michigan State Medical Society.

Dr. Hafford: We wish to endorse Dr. Stone's nomination from our county.

Speaker Pyle: Are there any further nominations? If not, what is your wish?

Dr. Andrews: I move the nominations be closed and the Secretary cast the unanimous vote of the House for Dr. R. C. Stone of Battle Creek for President.

The motion was seconded by Dr. McIntyre, put to vote and carried.

Secretary Warnshuis: Mr. Speaker, your Secretary does so cast.

Speaker Pyle: I now declare Dr. Stone elected as President of the Michigan State Medical Society. (Applause.)

I would like to appoint Dr. Gorsline and Dr. Andrews to escort Dr. Stone to the chair for a few very brief remarks.

Dr. Gorsline and Dr. Andrews escorted Dr. Stone to the front of the room.

The House of Delegates arose and applauded.

Dr. Stone: Mr. Speaker, Members of the House of Delegates: I want to express to you my very sincere appreciation of the confidence which you have expressed in me by electing me to the office of President of the Michigan State Medical Society for the ensuing year.

The year promises to be a rather difficult one. I urge upon all of you delegates, as well as all of the members of the Michigan State Medical Society, to get together in harmony and unity with the hope that we may maintain our present high dignified position with the public.

I thank you. (Applause.)

Speaker Pyle: Next in order are nominations for President-Elect.

Président-Elect

Dr. Eklund: I should like to place in nomination the name of Dr. William J. Cassidy, Detroit.

Dr. M. S. Knapp (Genesee): I should like to place in nomination one who has been active in the service of this Society for over 25 years. For the last 20 years, almost continuously, he has been a delegate to this body, serving first from the Upper Peninsula and for the last ten years he has served from my own county, Genesee.

He is a former president of the Marquette County Society and has served many years on the Legislative Committee of both the county and state society. He has occupied the position of Speaker and Vice Speaker of this body. For six years he has been a delegate to the A. M. A.

I think such service as that should be recognized and should receive some reward from this body. I wish to nominate Dr. Carl Moll. (Applause.)

Dr. Curtis: I wish to support the nomination of Dr. William J. Cassidy.

Dr. Denham: I wish to support the nomination of Dr. Carl Moll.

Dr. Hume: Mr. Speaker, on behalf of the Shiawassee County Medical Society, and on behalf of myself, because I think I know him from his feet up, I wish to second the nomination of Dr. Moll.

Speaker Pyle: Are there any further nominations?

Dr. L. O. Geib (Wayne): I wish to second the nomination of Dr. William Cassidy of Detroit. Dr. Cassidy is a man who has been very active in Wayne County affairs. He is a go-getter. I think that he will put some real pep into the Michigan State Medical Society if he is elected.

Dr. Riley: I move the nominations be closed.

The motion was seconded by Dr. Curtis, put to vote and carried.

Speaker Pyle: I declare the nominations closed.

Dr. Gorsline: Inasmuch as there are two men nominated, and there is something in our Constitution and By-Laws saying that delegates may not be eligible for general officers, would it not be in order to have the report of the chairman of the Credentials Committee as to both of these men as to whether they are delegates and have been seated or not?

Speaker Pyle: I think that is always in order. Dr. Penoyer, I will call on you, as chairman of the Credentials Committee, for that information.

Dr. Penoyer: My records show Dr. Moll, of Genesee County, not seated as a delegate.

According to the records which were checked by four different individuals, Dr. William J. Cassidy, of Wayne, was seated as a delegate.

That is all I have to say.

Speaker Pyle: If I understand that correctly Dr. Moll was not seated as a delegate; Dr. Cassidy was seated as a delegate.

Dr. Curtis: I would like to ask that the Secretary of the Society be instructed to show the roll call slip that was signed by Dr. Cassidy as a delegate.

Secretary Warnshuis: I have none but the registration.

Dr. Curtis: That is a registration to the Michigan State Medical Society and not a registration of delegates.

Speaker Pyle: The chair has no Constitution to read as it is all on thin paper. I would invite further discussion of this subject.

Dr. Barone: Would the Credentials Committee be able to supply us with what session Dr. William Cassidy was seated as a delegate?

Dr. Penoyer: First session.

Dr. Curtis: I would still ask for the roll call slips.

Dr. Barone: I didn't see Dr. Cassidy seated or take part in any of the deliberations of this delegation. In the first session our Secretary mentioned the names as he gave the roll call. His name was not mentioned because we were checking them on our lists to see what counties the men came from and whether they were delegates or not.

Dr. Himmelhoch: As a member of the Credentials Committee I can state that Dr. Cassidy did not sign in as a delegate this morning.

Speaker Pyle: Is there any further discussion.

The chair will rule, as long as our Constitution is on thin paper and in thin air, that the nominations are closed and that Dr. Cassidy and Dr. Moll are the nominees for President-Elect. (Applause.)

I will appoint Dr. Himmelhoch, Dr. Wesinger and Dr. Gorsline as tellers.

Balloting proceeded.

Speaker Pyle: Has everyone voted, gentlemen? I will declare the ballots closed.

Counting of the votes.

Dr. Gorsline: Our ballots check with the tally on the blackboard and show 62 votes being cast, of which Dr. Cassidy has 30 and Dr. Moll 32.

Speaker Pyle: I declare Dr. Moll elected as President-Elect of the Society. (Applause.)

Dr. Barone: It seems to me that the chairman of our Credentials Committee some time ago reported that there were 62 seated delegates at that time. At a later time, after the nominations for President-Elect were in, Dr. Cassidy's name came up as being one of those who were seated. We

disputed that point. Now we find that 62 people have voted. It shows that Dr. Cassidy was not seated and that the chairman of our Credentials Committee was all wrong in so stating.

Speaker Pyle: The next in order is the election of delegates to the American Medical Association. Nominations are in order to take the place of Dr. Gorsline.

Dr. Denham: I would like to place in nomination the name of Dr. Gorsline to succeed himself. Dr. Gorsline has served for six years as a delegate to the A. M. A. His experience has been valuable. He has made valuable contacts. He will make us a valuable man. It would be hard to supplant him. I should like to see Dr. Gorsline succeed himself.

Dr. Garber: I take pleasure in seconding the nomination of Dr. Gorsline.

Dr. Rupp: I am glad to present the name of our friend, Dr. Riley, from Jackson. I know that he will give us good and fair play.

Dr. Wenger: I am pleased to support the nomination of Dr. Gorsline.

Dr. Hume: On behalf of Shiawassee County I wish to endorse the nomination of Dr. Gorsline.

Dr. C. B. Lakoff (Wayne): I wish to second the nomination of Dr. Riley.

Speaker Pyle: Are there any further nominations?

Dr. Chester: I move the nominations be closed.

The motion was duly seconded, put to vote and carried.

Dr. Gorsline: As I am involved in this matter will you please appoint someone in my place as teller?

Speaker Pyle: We will call on Dr. Rupp from Wayne, Dr. Wegner from Kent and Dr. Whitaker from Wayne to act as tellers.

Balloting proceeded.

Speaker Pyle: The chair will declare the ballots closed.

Counting of ballots.

Speaker Pyle: We will listen to the report of the tellers.

Dr. Whitaker: A check of the ballots shows that the number of ballots agree with the totals on the blackboard. Dr. Riley received 25, and Dr. Gorsline 34 votes.

Speaker Pyle: The chair declares Dr. Gorsline elected as delegate to the A. M. A.

Next in order is the nomination of delegate to the A. M. A. to succeed Dr. Brook.

Dr. Wilson: I would like to place in nomination, to succeed himself, Dr. J. D. Brook, of Kent County.

Dr. Brook has served the Society well and long, both in the State Society and as a delegate to the American Medical Association.

Dr. Gorsline: From personal contact and working with Dr. Brook over a number of years I know that he has done yeoman service for Michigan. If it had not been for his wide acquaintance in the House of Delegates we could never have brought the A. M. A. to Detroit this year. A man like that deserves to be returned. I therefore take great pleasure in seconding the nomination of J. D. Brook.

Dr. W. C. Ellet (Berrien): I also would like to take this opportunity of supporting the motion for Dr. Brook to succeed himself as delegate to the A. M. A.

Dr. Wessinger: I move that the nominations be closed.

The motion was seconded variously, put to a vote and carried.

Dr. Gorsline: There being no other nominations, Mr. Speaker, I move that the Secretary be instructed to cast the unanimous ballot of this House of Delegates for J. D. Brook to succeed himself as delegate to the A. M. A.

The motion was seconded by Dr. McIntyre, put to a vote and carried.

Secretary Warnshuis: Mr. Speaker, your Secretary does so cast.

Speaker Pyle: I declare Dr. Brook elected as delegate to the A. M. A. (Applause.)

Next in order is the election of a delegate to succeed Dr. Hornbogen.

Dr. W. E. Tew (Gogebic): I would like to place the old chief in nomination to succeed himself. We come from a part of the country so remote geographically that the only consideration we get is the consideration of fair play. We haven't the votes but we have had the man who has done the work. Dr. Hornbogen has been a member of the House of Delegates for the past thirteen years. If meritorious service deserves any consideration he certainly deserves consideration from the House of Delegates. I hope you give him that.

Dr. Hirschman: Nobody appreciates the hard work of the various delegates to the A. M. A. more than I do. Nobody appre-

ciates the fact that the various sections of this state should be represented.

As you probably have learned today during the activities of the House of Delegates, there has been a cry from Wayne County that it has not been properly represented in the House of Delegates. I was born in the Upper Peninsula of Michigan and I have many friends up there, including Al Hornbogen.

Wayne County has felt for some time that they should have a delegate. They have asked me to present the name of a man who has served in the House of Delegates and has had some experience. I will present him at this time, not with the idea of disparaging against Dr. Hornbogen's work but with the hope of securing some representation for Wayne County.

As representative of Wayne County I present the name of Dr. Henry Luce of Wayne County.

Speaker Pyle: Are there any further nominations? If not, the chair will consider the nominations closed.

As tellers I will appoint Dr. McIntyre, Dr. Tew and Dr. Connelly.

Balloting proceeded.

The chair will declare the ballots closed. Counting of votes.

Dr. McIntyre: There were 60 votes cast, of which Dr. Hornbogen received 21 and Dr. Luce 39. That tallies with the amount of votes cast.

Speaker Pyle: The chair declares Dr. Luce elected as delegate to the A. M. A. (Applause.)

Next in order is the election of three alternate delegates to the A. M. A. Nominations are in order.

Dr. Barone: I would like to place in nomination Dr. Riley of Jackson as alternate.

Dr. Denham: I would like to second the nomination of Dr. Riley.

Dr. Himmelhoch: I move the nominations be closed.

The motion was seconded by Dr. Curtis, put to a vote and carried.

Speaker Pyle: The chair declares the nominations closed.

Dr. Barone: I move that you give the Secretary proper instructions.

Speaker Pyle: I infer that the gentleman from Wayne means that the Speaker is instructed to cast the unanimous ballot for the House of Delegates for Dr. Riley of Jack-

son as alternate to the A. M. A. and I so declare him elected. (Applause.)

Nominations are in order for another alternate.

Dr. McIntyre: I wish to nominate Dr. Callery of Port Huron.

Dr. Hirschman: Wayne doesn't want everything in the world. We are full of the spirit of fair play. We have a delegate and we feel that the Upper Peninsula should have a look-in. I take pleasure in nominating Dr. A. W. Hornbogen of Marquette as alternate.

Dr. Geib: I move the nominations be closed.

The motion was seconded variously.

Dr. Callery: I should like to withdraw my name on that in favor of Dr. Hornbogen.

Dr. McIntyre: If Dr. Callery wishes to withdraw I consent.

The motion to close the nominations was put to vote and carried.

Dr. Tew: I move the Secretary be instructed to cast a ballot for Dr. Hornbogen.

The motion was seconded by Dr. Hirschman, put to vote and carried.

Secretary Warnshuis: Your Secretary does so cast.

Speaker Pyle: I declare Dr. Hornbogen duly elected as alternate to the A. M. A.

Nominations for another alternate to the A. M. A. are in order.

Dr. Geib: I nominate Dr. Denham of Kent.

Dr. Curtis: I second the nomination.

Dr. Barone: I move the nominations be closed.

The motion was seconded by Dr. Wilson, put to a vote and carried.

Dr. Rupp: Will the chair instruct the Secretary to cast the ballot?

The motion was seconded by Dr. Barone, put to vote and carried.

Secretary Warnshuis: Your Secretary does so cast.

Speaker Pyle: I declare Dr. Denham elected alternate delegate to the A. M. A.

Next we will receive the nominations of the delegates of the Councilor district of East Wayne.

Dr. G. C. Penberthy (Wayne): I nominate the ex-President of Wayne County, Dr. A. S. Brunk, Councilor.

Dr. Hasley: I would like to support that.

Upon motion duly made and seconded the nominations were closed.

Dr. L. T. Henderson (Wayne): I move the Secretary cast a ballot for Dr. Brunk for the East district of Wayne.

The motion was seconded by Dr. Wesinger, put to vote and carried.

Secretary Warnshuis: Mr. Speaker, your Secretary does so cast.

Speaker Pyle: The chair declares Dr. Brunk elected as Councilor from East Wayne.

Next in order are the nominations from the delegates for the Councilor district of West Wayne.

Dr. Connelly: I wish to place in nomination the name of Dr. Henry Carstens for Councilor from West Wayne.

Dr. McIntyre: I support Dr. Carstens.

Dr. Curtis: I move the nominations be closed.

The motion was seconded by Dr. Barone, put to vote and carried.

Dr. McKean: I move that the Secretary cast a ballot for Dr. Carstens for Councilor for West Wayne.

The motion was variously seconded, put to vote and carried.

Secretary Warnshuis: The Secretary does so cast.

Speaker Pyle: I declare Dr. Carstens elected as Councilor from West Wayne.

The next in order are nominations from the delegation of Oakland and Macomb County for Councilor from that district.

Dr. F. A. Mercer (Oakland): I desire to place the name of Charles A. Neafie, of Pontiac, in nomination for Councilor.

Dr. Curtis: I would like to support that.

Upon motion duly made and seconded the nominations were closed.

Dr. Eklund: I move that a unanimous ballot be cast for Dr. Neafie.

The motion was duly seconded, put to vote and carried.

Secretary Warnshuis: Your Secretary does so cast.

Speaker Pyle: I declare Dr. Neafie elected Councilor from Oakland and Macomb.

Next is nominations for Councilor from the Second District.

Dr. Riley: At the caucus held this afternoon among the delegates from the Second District J. Earl McIntyre received the nomination. I would like to place his name in

nomination as Councilor from the Second District.

Dr. Barone: I second that.

Dr. L. G. Christian (Ingham): I would like to place in nomination Dr. Earl Ingram Carr as Councilor.

Dr. McIntyre: Inasmuch as Hillsdale is not represented here I would like to be fair about this and nominate Bert Greene of Hillsdale.

Speaker Pyle: Are there any further nominations? If not the chair will declare the nominations closed.

Tellers chosen were Dr. Henderson, Dr. Dutchess and Dr. Treynor.

Balloting proceeded.

Secretary Warnshuis: It is a privilege to be able to present the State Commissioner of Health, Dr. Clyde C. Slemons. (Applause.)

Speaker Pyle: Just a minute. Has everyone voted? I declare the ballot closed.

We will hear from Dr. Slemons. (Applause.)

Dr. Clyde C. Slemons: Mr. Speaker and Members of the House of Delegates, Gentlemen: It is a privilege to be presented to you in my capacity tonight. I know you are busy. I have a lot of things that I would like to say to you, but I am going to postpone that until a later date.

I simply want to say that it is my intention to follow out the program that your friend, and my friend, Dr. Guy L. Kiefer, started, as far as the Michigan Department of Health is concerned. (Applause.)

I want all of you to feel—although I know a great many of you personally still there are others that I do not know personally—that our door is always open to you. We are glad to have you call on us at any time. In the future I expect to meet you officially in your various capacities in your various counties.

I thank you. (Applause.)

Counting of votes.

Dr. Henderson: We have 61 ballots cast, which tabulate with the blackboard, and of which Dr. McIntyre received 40, Dr. Carr 7, Dr. Greene 14.

Speaker Pyle: I declare Dr. McIntyre elected as Councilor from the second district.

Next in order are nominations for Councilor from the Third District.

Dr. A. G. Holbrook (Branch): I wish to nominate Dr. Hafford from Albion.

Dr. Charles Morris (St. Joseph): I am pleased to second that nomination.

Dr. Gorsline: I move the nominations be closed and the Secretary be instructed to cast the unanimous ballot of this House of Delegates for George Hafford for Councilor from the Third District.

The motion was seconded by Dr. Hume, put to a vote and carried.

Speaker Pyle: I declare Dr. Hafford elected as Councilor from the Third District.

Vice Speaker Dutchess assumed the chair.

Vice Speaker Dutchess: Next in order is the election of Speaker of the House.

Dr. Chester: I take great pleasure in nominating Dr. Pyle for the Speaker of the House. We feel good service should be rewarded. (Applause.)

Dr. McIntyre: I wish to support that.

Dr. Curtis: I move the nominations be closed. (Applause.)

The motion was seconded by Dr. Wilson, put to vote and carried.

Vice Speaker Dutchess: I declare the nominations closed. (Applause.)

Dr. Hasley: I move the Secretary be instructed to cast the unanimous ballot for the Speaker of the House.

The motion was seconded by Dr. Connelly, put to vote and carried.

Secretary Warnshuis: Mr. Vice Speaker, your Secretary does so cast.

Vice Speaker Dutchess: I declare Dr. Pyle elected Speaker to succeed himself. (Applause.)

Speaker Pyle resumed the chair. (Applause.)

Speaker Pyle: Gentlemen, in the twilight of my years (laughter) I must admit that this tickles my vanity. For once I can be a servant of organized medicine. The delegates from my home county have connived against me to put me in a place where I cannot make many speeches, but I have to listen to the other fellows. I think Mrs. Pyle thinks it will be good training for me because I have become a good listener. I thank you. (Applause.)

Next in order are nominations for Vice Speaker.

Dr. Connelly: I wish to place in nomination the name of Dr. Charles Dutchess as Vice Speaker.

Dr. Henderson: I support that.

Dr. McIntyre: I support that motion.

Dr. Andrews: I move the nominations be closed.

The motion was seconded by Dr. Eklund, put to a vote and carried.

Dr. Curtis: I move the Secretary be instructed to cast the unanimous vote of this House for Dr. Dutchess as Vice Speaker.

The motion was seconded variously, put to vote and carried.

Secretary Warnshuis: The Secretary does so cast.

Speaker Pyle: I declare Dr. Dutchess elected to the office of Vice Speaker.

The next order of business is to designate a place for the next annual meeting.

Secretary Warnshuis: Our Council presents the following communication under date of May 28, signed by the President of the Oakland County Medical Society.

Reading of the letter mentioned.

Then there is a communication from the Secretary of the Society in which they set forth their accommodations.

Reading letter listing accommodations.

Dr. Eklund: In addition to that I want to read a letter to the House of Delegates from our mayor.

Dr. Eklund read a letter from the mayor of Pontiac, which supplemented former invitations to hold the convention in that city.

Dr. Hume: I move that we accept the invitation of Oakland County Medical Society.

Dr. Hirschman: I take great pleasure in supporting Pontiac for 1931.

Speaker Pyle: Are there any further places of meeting that you wish to designate? If not, I will entertain a motion that we accept the invitation of Oakland County as the place for our next annual meeting.

A motion to that effect was made, seconded, put to vote and carried.

Speaker Pyle: The chair designates that the recommendation of the House of Delegates is that we meet in Oakland County, at Pontiac, for the next meeting.

Is there any unfinished business to come before the assembly?

Secretary Warnshuis: There is none upon the Secretary's desk, Mr. Speaker.

Dr. Hirschman: Under the head of unfinished business I would like to take this opportunity, on behalf of the House of Delegates, to express our appreciation of the

efficient and fair and impartial manner in which the Speaker has conducted the proceedings of this assembly.

I wish to put that in the form of a motion, that we resolve in that manner and have it spread upon the minutes.

Vice Speaker Dutchess assumed the chair.

The motion was seconded by several.

Vice Speaker Dutchess: It has been moved and seconded that the House of Delegates express their appreciation for the fair and impartial and efficient manner in which Dr. Pyle has conducted the affairs of this House. Is there any discussion?

The motion was put to a vote and was carried. (Applause.)

Speaker Pyle resumed the chair.

Speaker Pyle: I made two speeches before this House of Delegates. I have to save my thunder for the Speaker's address. But, I do thank you.

Is there any unfinished business? Is there any new business?

Dr. Candler: I think I had quite a little to say about the Council this afternoon. In order to have them go away feeling good I would like to show them that there is no hard feeling on my part against the Council.

Therefore, I move that this House of Delegates go on record as expressing its appreciation of their efforts on behalf of the State Medical Society for the past year. They have given their time and effort and have spent a lot of money of their own going from town to town and have kept away from their own business.

Therefore, I move the adoption of such a resolution.

The motion was seconded by Dr. Wenger, put to a vote and was carried. (Applause.)

Dr. Connelly: I move we adjourn.

The motion was seconded by Dr. Eklund, put to vote and carried.

The House of Delegates adjourned sine die at nine-fifteen o'clock.

H. J. PYLE, *Speaker*,

F. C. WARNSHUIS, *Secretary*.

MINUTES OF THE ANNUAL MEETING OF
THE COUNCIL

The Council of the Michigan State Medical Society met in annual session at St. Joseph on September 14, 1930, at 6:00 P. M.

Present: Ray C. Stone, Chairman
J. D. Brook, President
F. C. Warnshuis, Secretary
B. R. Corbus
Henry Cook
C. E. Boys
J. D. Bruce
O. L. Ricker
Richard Burke
Julius Powers
P. R. Urmston
B. F. Green
T. F. Heavenrich

1. The Secretary announced the death of the father of Councilor Van Leuven, and on motion of Bruce-Ricker, the Secretary was directed to send the sympathy of the Council.

2. The Secretary presented a telegram from J. Hamilton Charters in which he announced his inability to be present at this Annual Session. Upon motion of Urmston-Cook, the Secretary was directed to write Dr. Charters and convey to him an expression of appreciation of the services that he had rendered to the Council and to the State Society during his term as Councilor.

3. Upon motion of Heavenrich-Boys, the Minutes of the Executive Committee as published from time to time were approved and made part of the Minutes of the Council.

4. The Secretary reported upon the present sale of our History and after a discussion upon motion of Corbus-Powers, the Secretary was directed to confer with the publisher and then to adopt measures most suitable for increasing the sale of the History.

5. Upon motion of Cook-Green, the following Honorary Members were elected:

Dr. Bruce presented the name of George B. McCallum, Monroe County.

Dr. Urmston presented the name of E. A. Hoyt, Bay County.

Dr. Burke presented the name of G. G. Barnett, Marquette-Alger. These were duly elected.

6. Upon motion of Corbus-Heavenrich, \$7,500.00 of the Society's funds were directed to be set aside as a History Fund.

7. Upon motion of Ricker-Urmston, the Secretary was directed to expend the sum of \$300.00 to defray the expenses of buildings used for the Annual Session.

8. The Secretary then presented the Annual Report of the Council to the House of Delegates and after a free discussion with certain amendments, upon motion of Heavenrich-Boys the Annual report was adopted.

9. Dr. J. B. Jackson, Chairman of the special committee of the Council to confer with the Crippled Children's Commission, presented a detailed and extended report of the conferences that have been held. Upon motion of Urmston-Green, the report was approved and the committee continued.

There being no further business the Council adjourned for the evening.

SECOND SESSION

The Council met in second session at noon on September 15, 1930.

1. Councilor Bruce presented an extended report of the plans proposed for the administration of the joint Diagnostic Clinic to be conducted by the Michigan State Medical Society, the Post-Graduate Department of the University of Michigan and the Couzens' Foundation. Upon motion of Burke-LeFevre, the Council records its approval and endorsement of the plan as outlined by Dr. Bruce for the organization and conduct of the Upper Peninsula Diagnostic Clinic under the Guidance and supervision of the State Medical Society, the Post Graduate Department of the University of Michigan and the Couzens' Foundation.

2. Chairman Stone presented his resignation as Chairman of the Council and as Councilor, which was accepted. The Secretary was directed to inscribe on the Minutes of the Society an appropriate appreciation of the services that Dr. Stone had rendered.

3. Dr. Bruce presented the plan under which the Medical Department of the University of Michigan was now being conducted and upon motion of Cook-Heavenrich, the Council expressed their congratulations to the Board of Regents and the University in their election of Dr. Ruthven as President of the University, and further expressed full confidence in the newly appointed administrative committee that is now in charge of the medical department of the University.

4. The Secretary presented the desirability of having a badge for the President of the Society and also for Past Presidents. After discussion the Secretary was directed

to secure suitable designs and to present the same for consideration at the January meeting of the Council.

Adjourned.

THIRD SESSION

The third session of the Council was held at 10:00 P. M. September 15, 1930, and was called to order by the Vice-Chairman of the Council, Dr. Corbus.

1. Upon nomination by Dr. Boys and supported by several, Dr. Corbus was nominated for the office of Chairman of the Council. The Secretary put the vote and declared Dr. Corbus unanimously elected.

2. Upon nomination of Dr. Heavenrich, Dr. Henry Cook was elected as Vice-Chairman of the Council.

3. Upon motion of Powers-Le Fevre, the time and place of holding the January meeting of the Council was delegated to the Executive Committee.

4. The newly elected Councilors, Doctors Burke, Carstens, McIntyre and Neafie were introduced to the other members of the Council and the Chairman after welcoming and congratulating them upon their election outlined general measures and policies that were pursued by the Council in the administration of the Society's affairs.

There being no further business the Council adjourned.

BURTON R. CORBUS, *Chairman*

F. C. WARNSHUIS, *Secretary*.

GENERAL SESSION

The General Session of the 110th Annual Meeting of the Michigan State Medical Society, held in Peace Temple, Benton Harbor, Michigan, Tuesday evening, September 16, 1930, convened at eight o'clock, Dr. J. D. Brook, Grandville, President, presiding.

President Brook: The invocation will be made by the Reverend Dr. Howard D. Blanning.

Rev. Dr. Howard D. Blanning: Let us all unite in prayer.

Good father of us all, we come together in this evening's session to have our minds stimulated and our horizons broadened, our tasks enlarged and glorified by the program that is to follow.

We are honored by the presence of that profession which deals with life and health and which contributes to man's happiness and well being. May we ever feel that in its great service of prevention and redemption we are sharers with that greatest of all Servants by Whose coming the blind received their sight, the lepers were cleansed and the deaf were made to hear and the captives were set free.

In these days of world adjustment we are grateful for this noble profession that knows no boundaries of race or nation but are knit to humanity with cords of love. We ask tonight that thy presence may be with us and about us and within us, in Jesus' name. Amen.

President Brook: We will now listen to a welcoming address by President J. J. McDermot of the Berrien County Medical Society. (Applause.)

Dr. J. J. McDermot (Berrien County Medical Society): Mr. President and Honored Guests, Members of the Society, Ladies and Gentlemen: As President of the Berrien County Medical Society it affords me genuine personal pleasure to welcome you to the Twin Cities.

We feel especially highly honored indeed inasmuch as this is the first time in the hundred and ten years of the existence of the Society that we have had the privilege of acting as host to such a distinguished personnel and scientific group as we have gathered in the Society tonight.

Our committees have attempted seriously to anticipate your every wish and pleasure. We hope you will enjoy our beautiful shores, both on river and on lake, as well as our scenic drives, our bountiful fruit harvest and the many historical spots which we who live here love.

Again, in conclusion, we welcome you most heartily and hope your stay in the Twin Cities will be most pleasant and profitable. (Applause.)

President Brook: Mr. Secretary, have you any announcements?

Secretary Warnshuis: None, Mr. President.

Dr. George F. Inch, Traverse City, First Vice President, assumed the chair.

First Vice President Inch: It gives me great pleasure to introduce the President of the Michigan State Medical Society who will address you on, "The Passing of the Family Doctor and Practice of the Future." Dr. J. D. Brook. (Applause.) (See October Journal.)

President Brook resumed the chair.

President Brook: I am very much pleased to be able to say to you that we have as our invited guest one of the outstanding orators of the middle west.

Dr. Dwyer is an American. He believes in Americanism. He lives Americanism and he talks Americanism. He is witty and he is resourceful.

The story is told that on one occasion when he was to address an audience in Boston he stepped off the train clad in an old raincoat and an old slouch hat, grabbed a taxi and headed for the hall

where he was to appear. When he arrived he was met at the door by a burly policeman who refused to admit him. Dr. Dwyer's resourcefulness was brought into play. He backed away and went to the side of the hall, found the back door and went in.

Just as soon as he had gotten in he was spied by the house detective, who promptly grabbed him and proceeded to throw him out. On the way out he was spied by one of his friends, who retrieved him and peace was restored.

Dr. Dwyer spoke in Detroit last December. I heard him at that time and was so impressed with his address, and the sentiments that were contained therein, that I invited him to address us this evening so that people from another part of the state might have the benefit of his ideas on Americanism.

Therefore, I take very great pleasure in presenting to you Dr. G. W. Dwyer, Professor of Economics at Vanderbilt University at Nashville, Tennessee, (Applause.)

Dr. G. W. Dwyer: From that introduction you will know that it is useless for me to try to get very far on my face. I can say this much, however, about my beauty, and that is that it is natural and not at all made up. (Laughter.)

A fellow came into a man's office one day. He had acquired a stammer in his speech. However, the man liked him and thought he would keep him in the office if he could. Then he spoke to him regarding his manner of speech and he said, "Did you ever attend that school for stammerers in Chicago?"

The man said, "N-n-n-n-o Sir. I n-n-n-n-never attended any school. I-I-I-I-I just p-p-p-p-picked it up myself." (Laughter.)

I am glad to see quite a number of people here who do not belong to the medical profession. It makes me feel a little more at home. It is a sort of risky guess to try to say why people come to attend meetings. They come for various reasons. I heard of a preacher, some time ago, who got himself into trouble one day. A woman in a certain rural community was killed by the kick of a mule. The mule belonged to the son-in-law. I don't know whether the accident was a conspiracy between the son-in-law and the mule or not.

When they had the funeral the preacher thought that because it was a big affair he really ought to say something about it all. So, he commented to the son-in-law at the service that he ought to be congratulated on the fact that his mother-in-law had had a remarkable popularity as demonstrated by the big turnout at her funeral.

The son-in-law said, "This crowd of men didn't come to attend my mother-in-law's funeral; they have all come here to buy that mule." (Laughter.)

So, in like manner it is a little bit risky to presume to explain the attendance at meetings. I don't know if this community is the same as the one I'm about to speak of, but there was a community where the people had never seen a mirror. Of course, some of us wouldn't have suffered very much if we had been living in a community like that.

A man heard about that and he thought it would be a good place to make some money by introducing mirrors. He thought perhaps it might take too much explaining to tell them what a mirror was so he thought he would sell them as a new type of picture.

He met a farmer and presented him with a mirror. He said, "Here is a picture that I would like to sell you."

The man looked at it and said, "Why, that is a picture of my father. I didn't know there was one made."

So he had no trouble selling him a picture of his father. The man took it home, hid it and didn't

show it to his family. But, every time he had the opportunity he would slip it out and take a look at it. He kept it in a barrel.

One day his wife saw him going out to the barrel and she wondered what it was that was taking him to the barrel so often. We know now why they go but this was different. So, she went out because she wanted to see what it was that was taking him there. She opened up the lid of the barrel, and seeing her own picture in the mirror she said, "Aha, so that is the old hussy he has been running around after all of this time." (Laughter.)

It is really quite unusual for me to talk to a group of this sort. Most of my speaking is done before business men, bankers and manufacturers, and sometimes farmers.

I learned a lesson from Mr. Gladstone that has helped me a good deal when I speak before the various groups. All of you know that Gladstone was a great statesman. But, very few people knew that he was a Greek scholar and that he spent a great deal of time in the translation of Greek. He took a great pride in his knowledge of Greek. But, they say that when Gladstone met a Greek scholar you couldn't get him to say a word about Greek. He would then talk about politics. But, when he met a politician he would talk about Greek.

The point there is, Never talk to men about the things they know more about than you do. Always talk to them about something that they do not know much about. You may not know anything about it either but they will not know that. I do not presume to come here and say anything about medicine. You cannot get me to do that.

This is a mighty strenuous time with business men. This age in which we live is a very dynamic age. The address that we listened to a short time ago indicates the changes that are coming along very quickly. Dynamic is a technical term the meaning of which is this, that it is the time of radical, revolutionary changes that come without warning and that may put one out of commission at any time.

There is no longer such a thing as a stabilized business. I do not know if there is such a thing as a stabilized profession. We do not know what will happen tonight, or tomorrow, that may put us out of business. That is the nature of the time in which we live.

One reason why this depression continues is that there is today, as never before, an uncertainty about what is coming next. As long as people are uncertain they are slow to take a stand or to lead out on anything.

The textile manufacturers thought that perhaps their business was an exception to this phase, that changes might come in many things but that certainly no radical changes would come in the textile business. They were engaged chiefly in the manufacture of material for women's clothes and they thought women would wear clothes for a long time—they really thought they would continue with that practice. (Laughter.) They had no idea that anything would happen to put them out of commission.

But, you know what happened. Without any warning at all there was a change of style and women decided, for reasons entirely satisfactory to themselves, to cut off their skirts. They cut them off pretty high, too. Then they decided to reduce the quantity of clothing enormously before they stopped cutting temporarily. (Laughter.) That procedure put the entire textile business on the rocks instead of just on the verge of bankruptcy. That same thing might happen to any business or profession today.

Women told us years ago that if they got equal rights with the men, and got all the privileges that the men were enjoying, they would show us something. They kept their promise on that all right.

(Laughter.) However, they are not showing business what it wants to see.

Changes are going on in every profession. That is all due to this dynamic nature of the present order of things.

Out in Ohio, before the coming of the automobile, a doctor friend of mine, who had a horse and buggy, had what he thought was a good practice in medicine in a small town. But he said, "I had a good practice until I got an automobile and then I discovered that I had no practice at all." Don't you see, the whole thing had changed.

I think Americanism is an entirely appropriate subject for a meeting of this sort. The fathers of our government never anticipated that the leaders in society would shirk their responsibility. Governments are always run by a few people. Democracy is a pure theory. The crowd never runs anything. And it is a fortunate thing that they do not; they cannot. There are always just a few people who run things.

In the early days it was assumed that the leaders in society—the doctors, lawyers, the school teachers, the men of brains and leadership—would always assume the responsibility of leadership and thereby protect American ideals. American ideals are too great, they are too profound for the rank and file. The rank and file cannot understand them. Unless the men of brains assume the responsibility of leadership these ideals will pass away as they did in the early days.

As you know, there was a time when doctors were the outstanding leaders in their communities. They were leaders in almost everything—politics, education—and every man with strength assumed this leadership under the old law of things.

But, when they came to the city to live life got to be a strenuous thing, they shirked their responsibilities and devoted themselves to business. Society was turned over to a crowd under that Socialistic theory of "Let the people rule."

Did you ever think about how little there is in that phrase, "Let the people rule"?

The people cannot run anything. They cannot run a peanut stand, much less a government. There never was anything that was run by the people. You never saw a church that was run successfully by the crowd. There isn't a bank in this town that wouldn't go into bankruptcy in 60 days if you should let the depositors run it. There is no bank fool enough to try that. There isn't anything that can be run by the crowd. That is contrary to all reason.

So, I say, they all came into the cities. We left them alone. They ran things. Millions came that never should have come. They crowded into all sorts of places and they created all sorts of serious problems. But, there they are. What are we going to do with them? Who is going to take care of them? Why did they come? Nobody brought them.

They came because they wanted to. There are no strings on them now to hold them there.

This is a great big country. There never was a time in this country when it was easier for a man to make a living than it is today, if you go where you want to live.

These people are just like a boa constrictor that was crawling along in a field. He got to a fence. There was a crack in the fence that was big enough for him to go through. Before he started through a rabbit jumped up. The boa is very fond of rabbits. So, he swallowed the rabbit, regardless of what problem he might create when he did swallow it. Then he started through the fence. He got down as far as the rabbit but then he could go no further. But, he was anxious to go through and he wouldn't go back. It was very important that he should get through.

While he was trying to get through another rabbit came along. He caught him too and swallowed him. Then he had a rabbit on either side of the fence and he couldn't get forward and he couldn't go back. He reasoned just like some of these people are reasoning: that he was the unfortunate victim of conditions over which he had no control. (Laughter and applause.)

That is our trouble. I never apologize to anybody, anywhere, for interpreting Americanism. You may believe that, or you may not; it makes no difference to me.

I believe if I should ever apologize for it, it would be the same sort of an apology that was given by a nigger preacher to the members of his congregation. He announced in church one day that he knew of three chicken thieves sitting before him, "Two and Brother Johnson."

Brother Johnson went up to him and told him he couldn't call him out in public that way. So the preacher said that at the evening service he would take back the statement and would make an apology. So, at the evening services the preacher said, "I said this morning that there were chicken thieves in the congregation, including Brother Johnson. I want to apologize to Brother Johnson for making that statement. I will take that back and say that there are two chicken thieves in the congregation, not counting brother Johnson." (Laughter.)

Of course, there the explanation was entirely satisfactory. I think it is extremely unfortunate that so few people in this country do know what Americanism is. We ought to know what it is. It is remarkable how few people understand it.

People are teaching Government. I taught it before I understood what it was. I think I understand it now. But, it is not unusual for teachers to teach things which they do not understand.

When I first began to teach in the University, something like thirty years ago, I suppose I was as enthusiastic as most young fellows are about the brilliance of the human mind. I had heard a lot about it. But, after teaching for about thirty years I have given up all of that. The brilliance of the human mind doesn't impress me a bit. It is the stupidity of the human mind that impresses me now. How slow we are to get hold of anything that is new. Of course, we can go on and repeat something that someone else has told us, and we can do something that someone else has done. But, a monkey can do that. But, to think up something new, there is where we are slow in understanding even the simplest things. Therefore, we ought to be patient when we criticize people for a lack of mind.

A long time ago people used to use a one-prong fork. That was about 200 years ago. Then some Henry Ford thought if he should have another prong on there it would be an improvement. Just think of the stupidity of chasing after a tough beefsteak with a one-prong fork! But, they did that for ever so long.

I told that to a friend of mine once and he said, "Then think that men crawled through small holes in their shirts for thousands of years before anybody thought of slitting the front of it to open it and let them in." (Laughter.) Even then I think it must have been an accident and was done while crawling into it. (Laughter.)

We are slow, and it is for that reason that the medical profession deserves a great deal of congratulation on its marvelous progress in recent years. It is unusual to get people thinking about anything that is new.

The founders of our Government were very profound thinkers. The more I study them the bigger they get. It is hard to account for the type of

brains that we had here in this country in those early days.

Years ago I read something about Gladstone reading and studying the Constitution of the United States. After reading it and thinking it over he said, "The greatest political document that ever came from the brain of man."

For a long time I couldn't understand why that was true. I was reading John Fiske, the New England critic, some years ago, from his writing on James Madison, who was really the author of the Constitution more than any other man, and he said that Madison would go down in history as one of the greatest philosophers of the English speaking race. He also said that John Marshall, the great interpreter, would go down in history as one of the greatest lawyers in the English speaking race. That was all Greek to me. I had thought that the country didn't understand the Constitution. It looked like a dry document to me.

As a matter of fact, the Constitution of the United States is a philosophy of human society, very briefly and inadequately expressed, of necessity, but it does express a great philosophy of human society, of all life and association.

Practically every sort of government had been tried before that day. They seemed to be familiar with experiments in government in the past. While government in the past had differed on many things they had all agreed on one thing, that is: It is a proper function of government to direct the individual and to restrain the individual. The one function was to direct the individual's life.

They differed on the degree of direction and the degree of restraint, but they all agreed, practically, that it is the function of government to direct and to restrain the life of the individual.

In laying the foundation of the new government they came to a very remarkable conclusion. It is remarkable that we haven't recognized this more than we have. The conclusion that they came to was this: It is not the function of government to direct and restrain the life of the individual.

That was something new. That was a contribution to political science. It was the greatest contribution that has ever been made in human history, I think: that it is not the function of government to direct *and* restrain the life of the individual.

Starting on that they built up the Constitution to protect this new idea. The result was that they established two governments, really. The first government that they established was to carry out this ideal, and it was the system of self-government.

Ordinarily, when you use the term self-government you refer to the right of the community, or the nation, to govern itself. That is not self-government. Self-government means the right of the individual to govern himself. The Constitution of the United States was adopted fundamentally to protect the right of the individual to direct his own life.

No one expressed that better than Jefferson. It was the thought that was back of the Constitution. It was the thought that was at the very foundation of Americanism. Jefferson expressed that wonderfully when he gave the outline of self-government. The conclusion that they came to was, "Man has certain inalienable rights"—they are here (striking his breast)—"that no power under the sun can invade." Then he goes on to mention a few of them: right to life; right to liberty; right to the pursuit of happiness, which means the right to direct his own life in all those things that pertain to him as an individual without any sort of interference from the government or from any other source. There is no power recognized under the sun that can invade those inalienable rights of the individual. They practically drew a circle around each individual.

Then, into that circle they put every right that they could think of that pertained to that individual as an individual. They said, "In this sphere you are king, you are sovereign." And, sovereignty means supreme power and if you have supreme power there cannot be anything more supreme.

They made every American citizen a sovereign within a sphere that contained all of those things that pertained to him as an individual. The Constitution was adopted primarily to protect the individual sphere of self-government against the Government. That was what the Constitution was for: To protect self-government against what we ordinarily call Government.

They didn't believe in majority rule one bit. What is American democracy? Government of the people, for the people and by the people. Where did you ever get that? You do not get it from the Constitution. You do not get it from there at all. That was a later thing that was added. They didn't believe in a government by the people, for the people. They believed in a government for the people. They were for "of" but not "by."

Why? They knew the people too well; that is the reason. (Laughter.) Nobody believes in that much who knows the people. They knew the crowd.

In the first place, they knew that no man's freedom is safe in the hands of the people. Perhaps the people constitute the worst tyrant under the sun. Therefore, they said, "Something must be done to protect this individual in his rights, his freedoms, against the crowd."

They had trouble in adopting the Constitution. They were afraid the Federal Government would infringe on the rights of the individual and the state. So when it came to what they called the Bill of Rights they couldn't adopt it until they had agreed to put all of those things in there and add some more rights that they hadn't put in there to protect the individuals. They had religious freedom, and freedom of speech and any other kind of a freedom.

After putting all of those inalienable rights of the individual into the Constitution they said, "Now not a single one of these rights can be taken from the individual until two-thirds of Congress and three-fourths of the states vote for it. I think in that they anticipated modern conditions, but not enough, or they would have said nine-tenths of the states. But they thought that they were making it practically impossible to infringe on those rights. They couldn't conceive of a time that three-fourths of the states would join in a vote to destroy the freedom of the individual. They thought that many was enough to put in there.

What about a government by the people? They certainly didn't believe in the majority except in smaller things, but as far as the fundamental things were concerned that didn't go. Certain things run by majorities. That is a convenient way of settling something that isn't important. However, when it came to the major things they didn't agree to that in that way at all.

Then, what about government by the people? Our Government is divided into three coördinate departments. All the governments in this country are divided that way. They are: the executive, the judicial and the legislative. The combination of those three departments constitutes a government of the country.

How did they provide for the selection of those three departments of government? Not a single man in the executive department was to be elected by the people, not a single one from the President down through every single official. The President is elected by a small group.

They moved the judicial department two stages from the people. That department was to have its men appointed by a man who, himself, was not

elected by the people. They gave recognition to the people in only one department. That was the legislative department where they permitted them to elect members of the lower house for two years and elect the Senate over them for six years in order to block any fool thing that the representatives of the government by the people might do.

They outlined that as a supreme thing which was to establish a system of self-government for the first time in the history of the world; a government where the individual would be protected in his inalienable rights to direct his life in his own way without unwarranted interference from any source; he being the supreme judge of his own conduct as far as the government was concerned.

But, if they had stopped there the charge would have been made against them that this was a system of anarchy. They were great political philosophers. In outlining the matter and giving them a characteristic system of self-government they were following what Jefferson said, practically.

Then, someone would ask, What is government for? What is social or group government for? Then followed a very remarkable statement, which, in a sentence, outlined the characteristics of self-government and followed that with a sentence that gave the whole function of government as we call it.

Government is instituted for what purpose? To tell folks when to get up in the morning and when to go to bed? What to do? How to conduct themselves? No. Listen:

"Governments are instituted to protect the individual against those who would rob him of the freedom of directing his own life in his own way."

That is the function of government. They didn't mean that this individual can use his freedom in any other way than pertaining to him as an individual. Whenever he tries to encroach on the freedom of another individual then the government is put there to stop him. That is the function of government.

The function of government, according to that ideal, is not to restrain freedom but always to protect freedom. Therefore, it is not the function of government to restrain freedom of the individual. There the individual is king. Government has no right to invade his sphere. But, whenever anybody invades the freedom of the individual, government steps in and says, "No, you cannot do that."

That applies to business, to religion to social life too. When is a government justified in invading religion? It is justified in that sometimes. The government has no right to dictate to anyone what he should believe. Nor has the government the right to say the individual should go to church, or that he should stay away from church. That is really about the only sphere that we retain in America, the sphere of religion. Nobody cares what you do about that.

Yet, the government has a function there. In Lynchburg, Virginia, where I lived for awhile, there is a big nigger church, a Baptist Church, which is democratic in theory. They would vote a fellow in, or they would vote him out, whichever way the majority voted.

The rusty niggers in the church said that the preacher there was catering to the upper class. They said they were in the majority and they would put him out by vote. So, they called a meeting to vote on the question. The preacher knew that it would wind up in a row so he left the county, and the votes disappeared and they couldn't find out how the vote stood.

The rusties appealed to the mayor. The mayor sent over some policemen and told them to lock up the place. Then the mayor appointed a policeman to conduct the election. The rusty niggers did put him out. But, that was thoroughly justifiable. There was a crowd of niggers in that church that were invading

the rights of the other niggers. And, the function of government, whether in the church or in social life, is that wherever any individual, or group of individuals are trying, in any way, to interfere with the aims and the rights of other individuals the government will see to it that those individuals are protected in their inalienable rights.

Take the relation of government to medicine or to business. I think government has a place in all of these things, but that place is not what some people construe it to be. It is not the function of the government, under our theory, to conduct business at all.

The only condition under which government is justified in going into business is when some activity that is vital to the life of the nation is of such a nature that it cannot be entrusted to the individual. Things under that head are the post office business and the making of money. But, there are very few of these businesses.

Under the American ideal it is not the proper function of government to conduct business. That is one of the inalienable rights of the individual, to pursue his happiness in his own way and according to his own feelings.

When is a government justified in coming into the field of medicine? And that holds for business too. I think that applies to all. I think an illustration will give you a better idea of what I mean.

I saw a nigger football game once. It was very interesting. Fisk University in Tennessee is where it was. They were playing against the town's nigger team. It was in the early days of football and they didn't know as much about it as they do now. They had a hard time getting an official. Somebody suggested that the Fisk University athletic instructor was also the coach of the Fisk team and so they said they would get him to referee.

The town niggers agreed to that right away. But, they hadn't been playing very long when they said that they wouldn't play another bit until they took him out. I was standing near when I heard him talking to one of the town niggers. He said, "I didn't ask you to put me in. You folks came to me and asked me to referee."

They replied, "Yes, we did, but we didn't ask you to coach." (Laughter.)

So, the function of government in the field of business and in the field of medicine is not to coach. It is not to practice medicine. It is not to carry on the profession of medicine. The function of government in that case is the same as the function of the referee at a football game. That referee is not out there to tell them how to play. He may know how but he cannot tell them because that is not his business.

You will remember that fellow on the California team that ran the wrong direction; that referee had nothing to do with that. That was the fellow's inalienable right and he could run to either goal he pleased. (Laughter.) It wasn't the referee's business to tell him what way to run, or what he should do.

What is that referee in the field for? He is there to see to it that they play the game straight. That is also the function of government. It is not the function of government to conduct business, or to tell business men what to do; but to see to it that they play the game straight. It is not the function of government to direct the practice of medicine, or to practice medicine. Its only place in the sphere at all is to see to it that they play the game straight with each other.

Someone might say, "Isn't it risky to turn over the welfare of the human race, human society, to the individual? What is going to become of us? What about the social phases?"

Government may do a great many things in the

interest of the people as long as it does not invade the rights of the individual. My friends, I think that the chief cause of the downfall of governments in nearly every case in the past was the exercise of power. I do not believe that any government can stand to exercise great restraining power. The only government that can stand is the government that protects the individual in his rights.

That is the reason that Jefferson said, "That government is best which governs least."

The strongest government is the weakest government. Just take an example: Perhaps there never was a stronger government in all the history of the world than the German government. Germany was entering almost every field. The government was power. The government was dominating everything. We, in this country, seemed to think that it was all part of the whole world. Yet, one of the pathetic things, and almost the most pathetic thing in human history, was when their test came and they discovered the terrible weakness of that strong government.

As long as the Germans were winning, the great machine moved with precision. But, anybody can go on when things are coming their way, you know. But, just as soon as they were thrown on the defensive it was pathetic. It was a surprise to the Germans and to us, and to everybody. The whole thing went to pieces, and the Kaiser went to Holland. There is your great, strong government. When the crisis comes it will not stand.

That is what they do. You increase the power of government over people and the time will come when they will rise up and fight it.

Another thing, this idea of the American ideal is deeply engraved into the hearts of the American people because that ideal wasn't altogether new. You can trace it way back to the Anglo-Saxons before they came to civilization. They wanted their liberties and their rights to direct their own lives.

Another thing, when you pass any law—and I do not care what it is—that infringes on this inalienable right of the individual to direct his own life you are going to have trouble.

The individual does not recognize the right of any government to invade his rights. When a government does that it has a fight on its hands. That was the reason for the American Revolution. What was the reason? It was invasion, taxation without representation. They didn't pay the taxes but it was their right that was being infringed. When governments invade those rights of the individual they do it above Constitution, above law, above kings, above everything, because they do not recognize the right of any power under the sun to invade that right. When they do that they have a fight on their hands.

Another thing that was new, in a way, in establishing this system of self-government, was two words that were used, which have been joked about a great deal. Those are, "Free and equal."

Some say that they do not know what they mean. Of course, they didn't mean people were equal morally or any other way. However, those are the two most important, or at least two of the most important, words in our whole system—especially that "equal."

When I was at the University of Chicago somebody there said that an adjective and an adverb were one and the same thing and that there was no difference between the two. One very good professor then said that if that was so it helped him to understand something that he had never understood before. He said if they were born equal and free then there would be some sense to it. He said it helped him to understand the word "equal."

If you understand the American theory you will find that there is a wonderful meaning. The Amer-

ican system destroyed all the distinction between the individuals and made every citizen a sovereign. Sovereigns are always equal. But, when Belgium beats Germany, or Great Britain, or the United States, they must deal with Belgium as a sovereign because sovereign means supreme. All American citizens are sovereigns and in their dealings with each other you must deal with them as equals, always.

That is the thing that meant independence. Independence is the price of freedom. Therefore, it is grossly inconsistent for any individual, or class of individuals, under the American flag to ask for any sort of special assistance from the governments. You cannot do it or you lose your Americanism. An equal cannot ask an equal to give him charity. If he does then he becomes an inferior. For any group to appeal to the government for charity is for that group to give up its Americanism and say, "We are no longer Americans; treat us as wards."

There are three classes that the government must care for: criminals, paupers and the insane. Then there is another group that is so defective that they cannot work. We do not call criminals citizens and neither should the other classes be called citizens.

To be an American citizen you must assume the status of equality. Along with that you are compelled to take care of yourself and never holler for help. To holler for help is to give up your Americanism. Charity is inconsistent in America when given to normal people. The only people in America that can accept charity consistently are the insane, the criminal classes and the paupers. No normal American citizen can accept charity.

I do not know of anything that is more misunderstood than charity. Charity is decidedly a destructive force. There is hardly anything else that is as destructive to character and manhood and womanhood as charity. Charity is always a serious social disease, far more serious than typhoid fever. No community should ever be proud of its charity work any more than they are proud of the number of typhoid cases that they have.

The ideal American community is the community where there is no charity. The prime mission of every charitable organization should be to put itself out of commission.

But, there is a Socialistic ideal that is coming in to us. I am not fighting with the Socialists. I think there is a lot of good people among them. In Socialism the government takes care of all of them. That is not Americanism!

You might say that that is a hard doctrine. That seems to be the divine plan of the government. It is mighty hard for us to understand. Did you ever stop to think that the Lord could build a wall around an individual and could throw coals on him when he did something he should not do? But he didn't do it.

You can say what you wish, but God's system is to let every fellow take care of himself. He tells us if we will call on him he will give us guidance, and he will give us strength, but he is not going to take care of us in the sense of feeding us. No!

There is a deep philosophy back of that. Some of you will remember Sam Jones, the unique Evangelist of generations ago. He said something once in a humorous vein, but back of that humor is a deep philosophy. He said, "For a long time I did not know what a man meant when he asked me to stand for him, to go on his note. I stood for a few and then I found out just what was meant. I found out when the average man asks you to stand for him he means he is going to lie down." (Laughter.)

To the extent that the counties and the towns and the states and the government assume the re-

sponsibility of standing for these folks are they going to lie down. In a short while you have destroyed their manhood and womanhood and made them of the earth's surface.

These men knew human nature. We ought to have a little inconvenience anyhow.

Is it so bad to want this or that, so bad for one child to have a full stocking and all that sort of stuff? I never had any full stocking. And I think I am better off because of it. That is a weakening philosophy. That wasn't the idea behind all of this.

The idea of those men in giving us this great system of freedom and putting the responsibility on each individual to take care of himself was to make men of Americans. You cannot make them any other way. It is the only way you can do it.

This idea is coming in and it is spreading everywhere. We must take care of it. Charity is getting to be one of the biggest industries. It is growing tremendously all over the country. The more you do the more you are going to have. But, if you are going to stand up for them they are just going to lie down.

We were poor when I was growing up in Virginia. It wasn't such a long time after the Civil War. But, I do not remember more than one person in that county receiving charity. I think he was demented. Folks were not begging to have other folks take care of them.

Now you have grown rich. And, as I said awhile ago, there never was a time when it was easier for a man to make a living than it is today. He may not make it one place but he may make it out yonder in another. We are throwing up our hands and saying that the endowment must come in and that this poor fellow, who has lost his place, must be fed by the government and must be clothed by the government and all that sort of thing.

I think Americanism is contrasted with the theory of Socialism, that society must take care of folks. The Socialists believe in that theory. They do not believe in freedom. Their philosophy is entirely different than ours. That fact may be brought out in a little thing.

Did you ever think about the real difference between an oyster and an eagle? There is a lot of difference. You may say that there is a lot of difference but that you never thought about what the difference was.

When I was growing up in a rural county in Virginia, about 200 miles from the coast, I didn't see a live oyster. And I didn't see one until I was a pretty good size. Some of the men had said they had eaten the oysters alive. I knew then when you caught a fish it was pretty lively when you pulled it out, and I imagined that an oyster was something like a fish. But, the man had said that he ate oysters alive. I imagined him taking a kicking and scratching oyster and swallowing it alive.

But, when I saw my first live oyster the problem vanished. I couldn't tell the difference between the live and the dead oyster to save my life. The oyster has so little life that I do not think he knows himself when he is dead and when he is alive. (Laughter.)

But, have you ever stood close to an American eagle? It isn't accidental that that eagle is above our flag. You cannot find anything that so truly interprets American essentialism as does the American eagle. If you should stand close to him he would impress you as teeming with power and vitality and fierceness and courage. As he looks through you with his piercing eyes you shudder and say, "I would hate to have that thing get hold of me."

But, you are not afraid of the oyster. Why the difference? When God made the eagle, for some

reason he just pitched him up there and said, "Old fellow, you are free; take care of yourself. You are an American. Don't look to government but take care of yourself. Don't depend on women's clothes and charitable organizations but take care of yourself."

He has had a pretty hard time of it and he has had to fight. Sometimes he has gone two or three days without anything to eat. A lot of clubs would have taken care of him if they could have caught him, but thank God they couldn't catch him. When the cold nights come he hasn't a steam heated apartment and all the modern conveniences that some think the eagle ought to have. The eagle sits out on the limb of the forest trees and alone fights the storm and the wind and the ice and the freezing sleet. That isn't easy. But, he is free and he is taking care of himself; he hasn't been kept.

But, the Lord takes care of the oyster. I don't know why, but he does. (Laughter.) Oysters are Socialists out and out. He believes that the government ought to take care of him. The Lord does. He builds every oyster a house, and it is a good one too. It is strong and there is no trouble about anything breaking in on him. There is no crowding among the oysters because every one of them has a separate house. The house is beautifully artistic on the inside. The oyster never has to worry about unemployment. He has everything that he wants and all that just comes to him. His life is ideal. He doesn't have to do a thing but lie there and be taken care of and sleep and dream and improve his mind. (Laughter.) And that is the reason he doesn't even look alive.

The fathers of Americanism had an ambition for us. It wasn't that we should be oysters, but that we should be eagles. Being great philosophers they came to the conclusion that the only way to make men and women of them was to pitch them out and make them free; protect them in their freedom and let them take care of themselves. (Prolonged applause.)

President Brook: I am sure that our Americanism has been greatly stimulated by this very wonderful address by Dr. Dwyer.

The next order of business ordinarily would be nominations for President. However, yesterday at the meeting of the House of Delegates they took it upon themselves to revise the constitution, particularly that portion of it which has to do with the election of President and President-elect. The latter position was created as an addition. The change was made from the usual procedure of nominating the President at the General Meeting to electing the President at the House of Delegates meeting.

Therefore, as that was done yesterday that function, of course, will have to be passed over at this time. However, I do want to show you that the House of Delegates exercised very good judgment in the selection of a President. I am going to ask Dr. Corbus, the chairman of the Council, to escort Dr. Ray C. Stone, the newly-elected President, to the platform, to show the audience what a really good looking man he is, to say nothing about his special attainments.

Dr. Stone was escorted to the platform by Dr. Corbus. (Applause.)

This is putting Dr. Stone in a rather embarrassing position. I am sure he knew nothing about this. But I would ask him to say a few words. (Applause.)

Dr. Ray C. Stone: Mr. President, Members of the Michigan State Medical Society, and Guests: Your President has spoken very truthfully to you when he said that I knew nothing about this. As I arose out of my seat our most efficient secretary said, "Don't say too much." (Laughter.)

I do not know what I am expected to say, but I do want to say that last night, following my election by the House of Delegates, I acknowledged with very deep appreciation the honor which they have bestowed upon me in electing me the President for the coming year.

You might expect that I should make suggestions as to what the policies of the Michigan State Medical Society might be for the coming year. I am not in a position to do that. The policies are drawn up and adopted by your House of Delegates and by your Council.

However, I can say this to you, that no matter what policies are adopted I am sure that each and every member of this Society, during this year, is going to get back of that policy and do everything in his power to put that policy through.

If we will all do that a year from now when we meet in Pontiac we will be very happy, and the incoming President will likewise be very happy.

I thank you. (Applause.)

President Brook: Because of the changes in the Constitution, which provides specifically for a President-elect, we also had to elect a President-elect who will take office a year from now. This follows the system of the American Medical Association.

To show you the judgment that was exercised by the House of Delegates I am going to ask Dr. Henry Cook, fellow practitioner of Flint, and Vice President of the Council, to escort Dr. Carl F. Moll, President-elect of the Michigan State Medical Society, to the rostrum.

Dr. Moll was escorted to the platform by Dr. Cook. (Applause.)

Dr. Carl F. Moll: Mr. President, Members of the Michigan Medical Society, Invited Guests: Our most efficient secretary

coached the incoming President to make his remarks short. He likewise coached me. I am very thankful for the advice that he gave me. He said, "This year you are an oyster; next year you hope to be an eagle." (Laughter and applause.)

President Brook: Mr. Secretary, have you any other business?

Secretary Warnshuis: None, Mr. President.

President Brook: Is there any unfinished business that anyone wishes to bring before the meeting? Is there any new business? If not, this meeting will stand adjourned.

The meeting adjourned at nine forty-five o'clock.

ATTENDANCE RECORD

Adams, R. U.....	Kalamazoo
Allen, Norman.....	Detroit
Allen, R. C.....	St. Joseph
Amolsch, Arthur L.....	Detroit
Andersen, E. B.....	Grand Rapids
Andrews, F. T.....	Kalamazoo
Andrews, Sherman E.....	Kalamazoo
Arner, Fred L.....	Ann Arbor
Atkinson, J. M.....	Jackson
Auld, D. V.....	Lapeer
Axelson, A. V.....	Detroit
Baker, Abel J.....	Grand Rapids
Ballin, Max.....	Detroit
Barker, Paul S.....	Ann Arbor
Barnhart, S. E.....	Battle Creek
Barone, Charles J.....	Detroit
Barrett, F. Elizabeth.....	Kalamazoo
Bartemeier, Leo H.....	Detroit
Bartlett, F. Herbert.....	Muskegon
Bartlett, H. G.....	St. Joseph
Begle, Howell L.....	Detroit
Behen, Wm. C.....	Lansing
Belknap, Fred R.....	Benton Harbor
Bennett, C. L.....	Kalamazoo
Bentley, Neil.....	Detroit
Bertrand, W. F.....	Caloma
Bettison, Wm. L.....	Grand Rapids
Bien, W. J.....	Coldwater
Blackburn, H. M.....	Grand Rapids
Blakeley, A. C.....	Flint
Bodmer, H. C.....	Grand Rapids
Boet, F. A.....	Grand Rapids
Bogart, Leon M.....	Flint
Bope, W. P.....	Decatur
Boys, C. E.....	Kalamazoo
Breakey, Robert S.....	Lansing
Brines, Osborne A.....	Detroit
Brook, J. D.....	Grandville
Brooks, Clark D.....	Detroit
Brotherhood, James S.....	Grand Rapids
Brown, F. W.....	Watervliet
Brown, Horatio A.....	Jackson
Brown, R. J.....	Benton Harbor
Bruce, James D.....	Ann Arbor
Brucker, Karl B.....	Lansing
Brunk, A. S.....	Detroit
Brunson, E. T.....	Ganges
Budson, Daniel.....	Ann Arbor
Burke, R. A.....	Palmer
Burns, Wm. J.....	Detroit
Burrill, H. J.....	Benton Harbor
Burt, C. B.....	Flint
Cady, Frederick J.....	Saginaw
Caldwell, Geo. H.....	Kalamazoo
Callery, A. L.....	Port Huron
Camp, Carl D.....	Ann Arbor
Candler, Clarence L.....	Detroit
Carney, E. J.....	Durand
Carr, Earl I.....	Lansing
Carstens, Henry R.....	Detroit
Cassidy, Wm. J.....	Detroit
Chambers, M. S.....	Flint
Chandler, Donald.....	Grand Rapids
Chester, John L.....	Detroit
Christensen, C. A.....	Detroit
Christian, L. G.....	Lansing

Clark, C. P.	Flint	Heckert, J. K.	Lansing
Clarke, Norman E.	Detroit	Helkie, W. L.	Three Oaks
Clemes, W. W.	Blissfield	Henderson, Abby	Niles
Coburn, M.	Coopersville	Henderson, Harold	Detroit
Cole, Fred H.	Detroit	Henderson, L. T.	Detroit
Coller, Frederick A.	Ann Arbor	Henderson, Robert	Niles
Collins, Ward E.	Kalamazoo	Herring, N. A.	Niles
Collisi, Harrison S.	Grand Rapids	Herzer, H. A.	Albion
Connell, John T.	Flint	Hewitt, H. W.	Detroit
Connelly, Basil L.	Detroit	Hilborn, Caroline	Battle Creek
Connelly, Richard C.	Detroit	Hilborn, R. R.	Battle Creek
Cook, Henry	Flint	Himmelhoch, A. Joseph	Detroit
Cooper, Robert J.	Pontiac	Hirschman, Louis J.	Detroit
Corbus, Burton R.	Grand Rapids	Holes, J. J.	Battle Creek
Corley, E. H.	Jackson	Holly, Leland E.	Grand Rapids
Crane, A. W.	Kalamazoo	Hoogerhyde, Jack	Grand Rapids
Crosby, T. S.	Ironwood	Howard, R. B.	Benton Harbor
Croushore, James E.	Detroit	Hubbel, R. T.	Kalamazoo
Crowell, F. B.	Lawrence	Hudson, Wm. A.	Detroit
Crum, L. J.	Kalamazoo	Hume, Arthur M.	Owosso
Cudney, E. B.	Pontiac	Hurley, Harold L.	Jackson
Cunningham, E. M.	Cassopolis	Hungerford, P. R.	Concord
Curlett, J. E.	Roseville	Hutchinson, R. J.	Grand Rapids
Curry, George J.	Flint		
Curtis, J. D.	Detroit	Inch, G. F.	Traverse City
		Irwin, D. C.	Grand Rapids
Davenport, C. S.	Lansing	Jackson, John B.	Kalamazoo
Davidson, Edward C.	Detroit	Jeffrey, James R.	Battle Creek
Davis, David B.	Grand Rapids	Jennings, W. O.	Kalamazoo
De Boer, Guy Wm.	Grand Rapids	John, Geo. W.	Battle Creek
De Gowin, E. L.	Ann Arbor	Johnston, Collins H.	Grand Rapids
De Gurse, Thomas E.	Marine City	Jones, J. H.	Dowagiac
Dempster, J. H.	Detroit		
Denham, R. H.	Grand Rapids	Kamperman, George	Detroit
De Vries, C. F.	Lansing	Karr, Herbert S.	Detroit
De Witt, Stuart L.	Grand Haven	Kenning, J. C.	Detroit
Doty, A. G.	Detroit	Kerlikowski, A. C.	Ann Arbor
Douglas, Robert J.	Muskegon	Kessler, Manna	Bay City
Doyle, C. P.	Lansing	Keyport, C. R.	Grayling
Du Bois, Chas. F.	Alma	Kilroy, Frank	Detroit
Duffie, Don H.	Central Lake	Klein, Louis	Detroit
Dunnington, R. N.	Benton Harbor	Klingman, Theophil	Ann Arbor
Dutchess, Chas. E.	Detroit	Knapp, Harry B.	Battle Creek
		Knapp, Mark S.	Flint
Eames, Lucy N.	Muskegon	Kniskern, E. L.	Muskegon
Eggleston, E. L.	Battle Creek	Kok, Harry	Grand Rapids
Eggleston, H. R.	Grand Rapids	Kretchmar, Arthur H.	Battle Creek
Ekelund, C. T.	Pontiac	Kudner, Don F.	Jackson
Ellet, W. C.	Benton Harbor	Kurtz, John J.	Flint
Emery, C. S.	St. Joseph		
Erkfitz, Arthur W.	Detroit	Laird, R. G.	Grand Rapids
Estabrook, Bert U.	Detroit	Lakoff, Charles	Detroit
		Langford, Theron S.	Ann Arbor
Fahndrick, C. G.	Battle Creek	Lathrop, C. P.	Hastings
Farnham, L. A.	Pontiac	Laurin, V. S.	Muskegon
Failing, John F.	Grand Rapids	Lawrence, H. Payne	Bay City
Far, S. E.	Quincy	Lawrence, Wm. C.	Detroit
Fast, Ralph B.	Kalamazoo	Le Fevre, Geo. L.	Muskegon
Fenton, D. W.	Reading	Lewis, W. B.	Battle Creek
Ferguson, Lynn A.	Grand Rapids	Lickly, Iva M.	Muskegon
Finton, Walter L.	Jackson	Littlejohn, Wm.	Bridgman
Foley, E. L.	Alpena	Lojacono, S.	Marquette
Foshee, John C.	Grand Rapids	Long, Chas. E.	Grand Haven
Frothingham, George E.	Detroit	Loucks, R. E.	Detroit
Fuller, R. T.	Kalamazoo	Loupee, Sherman L.	Dowagiac
Furlong, Harold A.	Pontiac	Luce, H. A.	Detroit
Furstenberg, A. C.	Ann Arbor	Lyman, W. R.	Dowagiac
Gannan, Arthur M.	Detroit	MacArthur, Robert A.	Detroit
Garber, Frank W.	Muskegon	MacCracken, W. H.	Detroit
Garner, H. B.	Detroit	Macduff, R. Bruce	Flint
Geib, L. O.	Detroit	Mack, H. C.	Detroit
Gerls, Frank B.	Pontiac	Manwaring, J. G.	Flint
German, W. M.	Grand Rapids	Marshall, W. H.	Flint
Gerstner, Louis W.	Kalamazoo	Maurits, Reuben	Grand Rapids
Giddings, Burton D.	Niles	Maxwell, J. E.	Decatur
Goltz, Martha H.	Montague	May, Earl W.	Detroit
Goodrich, A. L.	South Haven		
Gordon, Thos. D.	Grand Rapids	McArthur, Stewart C.	Detroit
Gorsline, C. S.	Battle Creek	McClelland, Carl C.	Detroit
Grant, Lee O.	Grand Rapids	McClure, Roy D.	Detroit
Green, B. F.	Hillsdale	McDermott, J. I.	St. Joseph
Green, Geo. W.	Dowagiac	McGarvey, W. E.	Jackson
Greene, I. W.	Owosso	McIntyre, C. S.	Hastings
Grieve, Glenn	Big Rapids	McIntyre, J. Earl	Lansing
		McKay, A. A.	Manistee
Hafford, Geo. C.	Albion	McKean, Richard M.	Detroit
Hagerman, D. B.	Grand Rapids	McKillop, G. L.	Gaylord
Hanna, P. G.	St. Joseph	McKinlay, Leland M.	Grand Rapids
Hansen, John R.	Greenville	McKinney, Alexander	Saginaw
Hansen, M. M.	Marenisco	McNabb, A. A.	Lawrence
Harrington, A. F.	Muskegon		
Harris, Lester J.	Jackson	Mercer, F. A.	Pontiac
Hart, A. O.	St. Johns	Merritt, C. W.	St. Joseph
Hart, Vernon L.	Ann Arbor	Miller, Margaret A.	Grand Rapids
Harvey, Campbell	Pontiac	Miller, J. D.	Grand Rapids
Hasley, Clyde	Detroit	Miner, Frederick B.	Flint
Haughey, Wilfrid	Battle Creek	Mitchell, B. M.	Pontiac
Haynes, L. W.	Detroit	Mitchell, Carl A.	Benton Harbor
Heath, Parker	Detroit	Moen, Cornetta G.	Grand Rapids
Heavenrich, Theo.	Port Huron	Moll, Arthur M.	Grand Rapids

Moll, Carl F.	Flint	Tappan, W. M.	Holland
Moore, Vernon M.	Grand Rapids	Teifer, Chas. A.	Muskegon
Morrill, D. M.	Grand Rapids	Tew, W. Ellwood	Bessemer
Morris, Chas. G.	Three Rivers	Thompson, P. F.	Thompson
Morrison, W. T.	Pigeon	Tibbals, Frank Burr	Detroit
Morse, Plinn F.	Detroit	Tonkin, E. W.	Niles
Mortensen, M. A.	Battle Creek	Toshach, C. E.	Saginaw
Morter, R. A.	Kalamazoo	Towne, L. C.	Lansing
Murphy, Frank J.	Detroit	Treynor, Thomas P.	Big Rapids
Murphy, Fred E.	Cedar	Urmston, Paul R.	Bay City
Myers, C. M.	Dowagiac		
Neafie, Charles A.	Pontiac	Valade, Cyril K.	Detroit
Nelson, A. W.	Battle Creek	Vandeventer, V. H.	Ishpeming
Nelson, Harry M.	Detroit	Van Schoick, John D.	Hanover
Nesbit, Reed M.	Ann Arbor	Vanden Berg, Henry J.	Grand Rapids
Nesbitt, E. N.	Grand Rapids	Van Solkema, Andrew	Grand Rapids
Noble, D. Leonard	Battle Creek	Verity, Lloyd E.	Battle Creek
Northrup, Wm.	Grand Rapids	Vis, Wm. R.	Grand Rapids
		Votey, F. A.	Grand Rapids
O'Brien, D. J.	Lapeer		
Oden, Constance	Muskegon	Wainger, M.	Detroit
O'Donnell, W. S.	Detroit	Waldbott, George L.	Detroit
Oliver, Walter W.	Grand Rapids	Walker, R. J.	Saugatuck
Olsen, E. T.	Detroit	Wallace, S. W.	Detroit
O'Meara, J. J.	Jackson	Walters, F. R.	Battle Creek
Ostrander, Frank W.	Freeland	Walters, R. W.	Battle Creek
		Ward, W. E.	Owosso
Parsons, John P.	Ann Arbor	Warnshuis, F. C.	Grand Rapids
Peck, Willis S.	Ann Arbor	Watson, R. S.	Saginaw
Penberthy, Grover C.	Detroit	Welch, R. A.	Bellevue
Penoyar, F. C.	South Haven	Wells, Merrill	Grand Rapids
Perry, H. E.	Newberry	Wendel, Jacob S.	Detroit
Pinkham, J. F.	Belding	Wendt, Leonard F. C.	Detroit
Poole, Frank A.	Lansing	Wenger, A. V.	Grand Rapids
Porter, Horace W.	Jackson	Wenger, John N.	Coopersville
Powers, Lunetta I.	Muskegon	Werthenberger, Morris D.	Jackson
Powers, Julius H.	Saginaw		
Pratt, F. A.	Kalamazoo	Wessinger, John A.	Ann Arbor
Prout, Curtis T.	Detroit	West, Arthur E.	Kalamazoo
Pullon, Alton E.	Kalamazoo	Westervelt, H. O.	Benton Harbor
Pyle, H. J.	Grand Rapids	Whalen, J. M.	Grand Rapids
		Whinery, Joseph B.	Grand Rapids
Quick, Phil H.	Olivet	Whinery, Joseph F.	Grand Rapids
		Whitney, E. L.	Detroit
Ralph, L. Paul	Grand Rapids	Whittaker, A. H.	Detroit
Randall, H. E.	Flint	Wiley, H. W.	Lansing
Rice, G. W.	Watervliet	Wilkins, Robert W.	Ann Arbor
Richmond, D. M.	St. Joseph	Williams, Alden	Grand Rapids
Ricker, Otto L.	Cadillac	Williams, F. N.	Hartford
Rigterink, H. A.	Kalamazoo	Willits, Paul W.	Grand Rapids
Rigterink, T. W.	Grand Rapids	Wilson, Walter J.	Detroit
Riley, Philip	Jackson	Wilson, William E.	Grand Rapids
Ripple, Rudolph J.	Lapeer	Witt, E. J.	St. Joseph
Risk, Robert A.	Muskegon	Witter, Frank C.	Detroit
Robb, J. M.	Detroit	Witters, I. E.	Evart
Robinson, H. D.	Manistee	Wright, Donald R.	Flint
Rogers, John R.	Grand Rapids		
Rogers, Lloyd	Detroit	Yoder, O. R.	Kalamazoo
Rosenberry, A. A.	Benton Harbor		
Roth, Paul	Battle Creek	Zemmer, H. B.	Lapeer
Rowland, Russell S.	Detroit	Zimmerman, I. J.	Detroit
Ruble, S. J.	Monroe		
Rupp, J. D.	Detroit		
Sage, E. O.	Detroit		
Sawyers, Walter H.	Hillsdale		
Schermerhorn, L. J.	Grand Rapids		
Schmidt, Harry B.	Detroit		
Schmidt, T. E.	Jackson		
Schnoor, Elmer W.	Grand Rapids		
Schultz, Samuel	Coldwater		
Schwartz, Louis A.	Detroit		
Scott, W. A.	St. Johns		
Seybold, George A.	Jackson		
Shackelton, W. E.	Kalamazoo		
Sharp, Ara D.	Albion		
Shaw, Milton	Lansing		
Shepard, Benjamin A.	Kalamazoo		
Sherman, R. N.	Bay City		
Sladek, E. F.	Traverse City		
Slemons, C. C.	Grand Rapids		
Slocum, George	Ann Arbor		
Smeltzer, Merrill	Detroit		
Smith, E. W.	Benton Harbor		
Smith, Ferris	Grand Rapids		
Smith, R. Earl	Grand Rapids		
Smith, W. A.	Berrien Springs		
Snapp, Carl F.	Grand Rapids		
Snell, D. M.	Lansing		
Snowden, Robert H.	Buchanan		
Soller, M. E.	Ypsilanti		
Sowers, C. N.	Benton Harbor		
Spencer, Ralph H.	Grand Rapids		
Stealey, Stanley A.	Charlotte		
Stewart, John D.	Hartford		
Stone, Ray C.	Battle Creek		
Stonehouse, G. G.	Grand Rapids		
Strayer, J. C.	Buchanan		
Stryker, Homer H.	Kalamazoo		
Stuckey, A. E.	Coopersville		
Swanson, Cleary N.	Detroit		
Swift, B. S.	Middleville		
Switzer, L. W.	Ludington		

GUESTS ATTENDING ANNUAL MEETING— BENTON HARBOR

Abt, I. A.	Chicago, Ill.
Berteling, J. B.	Ann Arbor, Mich.
Birmingham, P. J.	South Bend, Ind.
Bond, Rex P.	Battle Creek, Mich.
Bowman, Ray	Elkhart, Ind.
Culbertson, Carey	Chicago, Ill.
Emery, W. C.	Kenton, Ohio
Fisher, L. F.	South Bend, Ind.
Fleming, J. M.	Elkhart, Ind.
Gottschalk, Clara	Chicago, Ill.
Gradle, Harry S.	Chicago, Ill.
Hamelink, M. H.	Sonoma, Calif.
Hartmann, Alexis F.	St. Louis, Mo.
Hersh, Wm. H.	Chicago, Ill.
Hull, Arthur W.	Elkhart, Ind.
Hutman, Helena	Chicago, Ill.
Iglauer Samuel	Cincinnati, Ohio
Judd, E. S.	Rochester, Minn.
Kepner, Guy L.	Detroit, Mich.
Larkum, Newton W.	Lansing, Mich.
Lashmet, F. H.	Ann Arbor, Mich.
McDonald, Peter W.	Detroit, Mich.
Riecker, H. H.	Ann Arbor, Mich.
Sawyers, Maybelle M.	Chicago, Ill.
Stein, Irving F.	Chicago, Ill.
Van Housen, Bertha	Chicago, Ill.
West, W. K.	Hinsdale, Ill.
Wiard, Marian	Kalamazoo, Mich.
Wightman, Helen M.	Kalamazoo, Mich.

SOCIETY ACTIVITY

ANNUAL SESSION

The endeavor has been made to include in this issue the major portion of the official transactions of our annual session. It has been humanly impossible to include the revised text of our new Constitution and By-laws. It is planned to publish these in the December issue.

Throughout this section and this issue one will find several reports and announcements as well as notices of appointments. They all relate to organizational activity and are of interest to every member. Form a habit of reading them and so remain informed as to the work that is being accomplished in your behalf.

In the advertising section the reader will find a list of newly elected officers.

MINUTES OF THE EXECUTIVE COMMITTEE MEETING OF THE COUNCIL

The Executive Committee of the Council met in Battle Creek on October 8, 1930, and was called to order at 4:00 P. M. by the Chairman, Dr. Corbus, with the following members present:

B. R. Corbus, Chairman
Henry Cook
George L. LeFevre
James D. Bruce
Ray C. Stone, President
Carl F. Moll, President-Elect
F. C. Warnshuis, Secretary.

1. Upon motion of Bruce-LeFevre, Dr. Cyril K. Valade was elected chairman of the new section on Dermatology and Syphilology. On motion of Cook-LeFevre, Dr. G. H. Belote of Ann Arbor was elected secretary of the same section.

2. Following the instructions of the Council, the Secretary reported upon his correspondence and interviews between the Bruce Publishing Company and the G. A. Ingram Company, relative to the sale of our Medical History. After discussion, upon motion of Bruce-LeFevre, the Chairman of the Council and the Secretary were empowered to make the necessary arrangements that are most desirable for the sale of our History.

3. The Executive Committee carefully reviewed the minutes of the last session of the House of Delegates relative to the revision and adoption of a new Constitution and By-Laws and during this review approved the wording of the changes that were made in the original draft. Upon motion of LeFevre-Bruce, the Secretary was instructed to so re-draft the Constitution and By-Laws and to print the same in an early issue of the Journal.

4. The Executive Committee entered into a lengthy discussion as to our legislative policies and program and tentative plans were advanced but were held in abeyance until after the November election, and will then be considered at the next Executive Committee meeting in November. In compliance with this action President Stone stated he would hold in abeyance the appointment of a Legislative Committee.

5. A communication was received from Dr. Dutchess, chairman of the State Cancer Committee, that was created at the last annual meeting. Upon motion of LeFevre-Cook, an appropriation of \$100.00 was made for the expenses of this committee's activities.

6. Upon motion of Cook-LeFevre, the Secretary was instructed to arrange for a County Secretaries' conference some time during January, 1931.

7. Upon motion of Cook-Boys, the Chairman and the Secretary were instructed to ascertain the most suitable time and place for the holding of the mid-winter session of the Council and to report their recommendations at the November Executive Committee meeting.

8. Upon motion of Bruce-LeFevre, the Secretary was instructed to write each Councilor requesting that he visit the county societies in his district before the first of the year, and that the Secretary request each Councilor to send in an official report of organizational activities in his respective district for presentation at the mid-winter session of the Council.

9. Upon motion of Boys-Cook, the Councilor of the Eleventh District, Dr. LeFevre, was authorized to perfect an amalgamation of Mason and Oceana County societies.

Upon motion of Cook-Boys, the following seniority rank of the Alternate Dele-

gates to the American Medical Association was approved:

Wm. J. Cassidy

Philip Riley

A. W. Hornbogen

R. H. Denham.

11. Upon motion of Cook-Boys, the Secretary was instructed to request the special committee of the Council that are holding conferences with the State Crippled Children's Commission to present to the Executive Committee a copy of the amendments to the Crippled Children's Act, that these two groups agreed upon, for review and that they do not concur in these amendments until the same has been reviewed and approval given.

The Executive Committee adjourned at 11:00 P. M.

F. C. WARNSHUIS, *Secretary*.

SCIENTIFIC EXHIBIT

The Scientific Exhibit of this year was a definite step in advance of that of 1929, not so much in numbers of exhibitors but in the material presented.

Dr. Russell Rowland, Detroit, Michigan, was awarded first prize for a very extensive and beautifully presented exhibit of anomalies and disturbances of lipoid metabolism, including Gaucher's disease, Nieman-Pick's disease and the Schuller-Christian syndrome.

The second award was divided between the City of Detroit Receiving Hospital; Dr. William Hudson, Detroit; Dr. Vernon L. Hart, University of Michigan, Ann Arbor, Michigan; Dr. George L. Walcott, Detroit, Michigan; and Dr. F. N. Smith, Grand Rapids, Michigan.

Dr. Ferris Smith, Grand Rapids, presented a very exhaustive study of asthma and the surgery of the accessory nasal sinuses, showing the use of iodized oil in the diagnosis of sinus pathology, colored photomicrographs of pathology of the sinuses in asthma and case records of completed cases.

Dr. O. A. Brines of Detroit Receiving Hospital gave a demonstration of the Asheim-Zondek test for pregnancy and several cases illustrating the use of uroselectan. Another part of his demonstration showed a method for the determination of iodine in urine and blood, illustrating the retention of iodine by the kidney in disturbances of renal function. This method of determination is, however, too difficult to be a practical test of renal function.

Dr. Lloyd Rogers presented a series of fractures and gun-shot wounds of the maxilla and mandible.

Dr. J. C. Kenning presented a series of X-ray studies, including malignancies and Charcot's spines.

Dr. William Hudson, with the coöperation of Drs. Stevens, Jarre and Hasley, had a large display illustrating the use of bronchoscopy and the diagnosis and treatment of foreign bodies, lung abscesses, neoplasms and other diseases of the chest.

Dr. George Walcott, Detroit, gave an interesting chart display on asthma, showing pollen surveys, climatic variations, unusual allergic causes of asthma, hypertension related to asthma, and lung pathology in asthma.

Dr. Vernon L. Hart from the Orthopedic Department of the University of Michigan showed a very interesting study of osteochondritis, including such conditions as Legg-Perthes', Calve's disease, osteochondritis dissecans, Osgood-Schlatter's disease, Freiberg's disease, Kohler's disease, etc. This exhibit was of practical importance and should have been seen by a greater number of the clinical men.

Dr. Don Duffie showed a series of charts on statistical studies of diabetics.

Dr. James E. Davis, Department of Pathology, Detroit College of Medicine and Surgery, showed a very beautifully prepared series of specimens of tissue showing the effects of jaundice.

Dr. Preston Hickie, X-ray Department, University of Michigan, was represented by a display of neoplasms of the esophagus and stomach, showing photographs and case records.

The exhibits in the location that they were attracted much more inspection and comment than those of last year.

We wish to thank the exhibitors for their co-operation in putting on this part of the Annual State Meeting.

W. M. GERMAN, M.D., *Director*.

COUZENS CHILDREN'S FUND CLINIC

The Michigan State Medical Society Post Graduate Department University of Michigan Couzens Children's Fund presented its fourth Clinic on Infant and Child Diagnosis and Disease at Munson Hospital, Traverse City, Thursday, October 9, 1930.

Program

- 10:00 A. M. a. Cyanosis of the Newborn
b. Hemorrhage of the Newborn
c. Feeding of the Newborn. Who shall direct the feeding?
d. Round table discussion of Infant Feeding Problems.

Dr. Thomas B. Cooley, Detroit

12:00 M. Luncheon

1:00 P. M. Progress and Purpose of the Whole Post-Graduate Movement

Dr. J. D. Bruce, Ann Arbor

1:30 P. M. Preventive Medicine and Public Health
Dr. C. C. Slemons, Lansing

2:00 P. M. Diagnosis and Treatment of Osteomyelitis

Dr. Grover C. Penberthy, Detroit

2:30 P. M. Tannic Acid Treatment of Burns of Children, with slides and demonstration of technic

Dr. Edward C. Davidson, Detroit

3:15 P. M. Management of Appendicitis

Dr. Grover C. Penberthy, Detroit

F. C. WARNSHUIS, *Secretary*.

MEDICAL HISTORY

The second volume will be distributed this month. The complete set will be sent on receipt of your order and check for \$10.00. Send in your subscription to the State Secretary.

COUNTY SOCIETIES

CALHOUN COUNTY

The September meeting of the Calhoun County Medical Society was held jointly with the Kalamazoo Academy of Medicine at the Maple Hills Country Club, Thursday, September 11, 1930.

The afternoon was spent by the golfers in a contest where individual Society members matched their skill against the Academy members. Detailed report of the contest is published elsewhere.

The dinner at the Country Club took place at 7:00 o'clock, with about thirty-five members present, in addition to those from the Academy.

Dr. Maxwell, the president of the Academy, called the meeting to order and called upon Dr. R. J. Hubbell to present the golf prizes. The Kalamazoo golfers, having won twenty-five points to twenty-three for Battle Creek, were awarded the Upjohn cup for the year.

The president then called upon Dr. Wilfred Haughey, the president of the Calhoun Society, to present the program. He took occasion to express the pleasure and gratitude of the Calhoun Society to the Academy for their kind invitation to join them in a meeting of this kind. The first number was a paper by Dr. R. C. Stone, on the Diagnosis of Intestinal Obstruction. The fact that the mortality rate in intestinal obstruction has not been lowered much in the last twenty-five years prompts us to make a more careful study of the causes of the high mortality rate. He listed the main symptoms of intestinal obstruction as follows:

1. Pain located in the epigastrium, which is due to intestinal disturbance, or of mesenteric origin.
2. Vomiting, early if the obstruction is high, and late if the obstruction is low. Fecal vomiting comes late in the disease.
3. Obstipation.
4. Distention, occurs late and more exaggerated the lower down the obstruction occurs.
5. Tenderness and rigidity, especially after peritonitis begins.
6. Visible peristalsis.
7. Audible peristalsis.
8. Fever, usually coming on late.
9. Rapid pulse.
10. X-ray localizes site of obstruction.

History of past surgery and of former attacks important. Careful examination should be made and after eliminating chest, renal, and cardiac conditions, and in the presence of this picture, operate at once.

Discussion was participated in by Drs. Balch, Jackson, Gorsline, and Crane. Dr. Crane emphasized the importance of differential diagnosis between perforation and intestinal obstruction.

Dr. C. W. Brainard had a paper on Industrial Surgery in the small factory, and referred to some of the dangers of employers utilizing services of first aid men who, in order to practice economy, often treated cases until complications made it necessary to send them to the physician. The good first aid man should be made to realize the value of sending the patient to the doctor early, especially if in doubt. He emphasized the value of cleanliness, soap and water being the mainstay. But also thought that the simpler the first aid equipment the better. Alcohol, iodine, cotton applicators, soap and water, and tweezers were about the limit requirements. The employment of graduate nurses by industrial plants was discussed, and owing to the tendency of the nurse to exceed her legal bounds

and keep from practicing medicine, this type of first aid help was not looked upon with favor. The discussion was participated in by Drs. Boys, Fast, Gorsline, Andrews, and others.

The third paper was by Dr. H. B. Knapp, on the subject of Foot Strain. Owing to the extreme styles in shoes with reference to heel elevation, foot strain, metatarsalgia, and bunions are becoming more and more common. The lack of support to the outer side of the arch of the foot in shoes having no built-in arch support, throws strain upon the foot which few feet are able to stand. He emphasized the importance of foot exercises, not only among those suffering from foot strain, but for the bed patient who has been off his feet for weeks, and who soon expects to begin to walk. The foot exercises should be taken while sitting or lying, but never while the patient is standing on his feet. The discussion was taken part in by Drs. Striker, Shakleton, Putman, Steinbach, and Maxwell.

The meeting was closed by the Kalamazoo president, following the program.

H. B. KNAPP, M.D., *Secretary*.

HILLSDALE COUNTY

The regular meeting of the Hillsdale County Medical Society was held at the Country Club, Hillsdale, Friday, September 26, at 6:30 P. M. Many members of the societies of Branch and Lenawee counties were present by invitation, many accompanied by their wives, as were the members of the Hillsdale County Society who were present.

After an excellent dinner the meeting adjourned to the club room where the President, Dr. Poppen, called the meeting to order and the Secretary at his request introduced the speaker of the evening, Dr. Stuart Pritchard of the Battle Creek Sanitarium.

Dr. Pritchard gave a most interesting and instructive address on "Bronchiectasis," illustrated by a number of lantern slides, taking up the etiology, pathology and results of this common but often overlooked condition; showed how it might arise from an attack of pneumonia, of localized tuberculosis, of pulmonary abscess or any condition causing obstruction of the smaller bronchi. He then passed to the frequent connection of this condition with sinusitis and later to treatment by instillation of iodized oil into the bronchi, rest, section of the phrenic nerve and other of the recent advances.

Discussion was opened by Dr. C. H. Westgate of Morenci followed by Dr. Green of Hillsdale and an interesting general discussion followed in which many questions were asked and answered, filling out obscurities in the subject.

Dr. Pritchard certainly threw a flood of light on a large group of obscure cases and deserves the thanks of every physician present during his magnificent address.

After the close of the discussion a short business meeting was held in which the name of Dr. Hodge of Reading was proposed for membership by Dr. Green and was favorably voted upon at once, making him a member of the society.

Among the invited physicians present were Dr. W. G. B. Marsh, of Tecumseh, President of the Lenawee county society, and Hon. R. W. McLain, chaplain of the state prison at Jackson, and Dr. Speck, the prison physician, as his guest, and Dr. Holbrook, Secretary of the Branch county society.

Under the head of public health, it was suggested that the committee appointed at the last meeting confer with the county nurse and work out the problems of the administration of toxin, antitoxin, smallpox vaccination, etc. It was suggested that they meet at an early date and formulate ways and means of promoting these important functions, also

the application of the Schick test, etc., and promote all needed action in that field.

It was moved, supported and carried, that our next meeting be held in the early part of November and that the program be made up wholly from local talent.

Adjourned.

D. W. FENTON, *Secretary-Treasurer.*

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. L. J. HARRIS, President, Jackson, Mich.
MRS. J. EARL McINTYRE, Secretary, Lansing, Mich.

October 3, 1930.

To the members of Michigan State Medical Society Woman's Auxiliary.

In submitting the fourth annual report of the Woman's Auxiliary to the Michigan State Medical Society, I wish to express to the Auxiliary of Berrien County our appreciation of the cordial reception the delegates and members received and urge as the delegates bring back to you the report of this enthusiastic meeting that you take a more active interest in your local organization this coming year.

Please send all news of your local organization to Mrs. P. R. Urmston, 1862 McKinley Avenue, Bay City, Michigan, not later than the first of each month.

LOUISE T. URMSTON,
Editor of Woman's Page.

The fourth annual meeting of the Woman's Auxiliary to the Michigan State Medical Society was called to order at one o'clock P. M. Tuesday, September 16, 1930, at Benton Harbor, Michigan, by Mrs. Ella Bartlett, general chairman of the twin cities of Benton Harbor and Saint Joseph. Mrs. Bartlett introduced the Reverend George Horst, who pronounced the invocation. Eighty-seven guests were present at the luncheon.

During the luncheon the guests were entertained by music of a stringed trio and vocal solos by Miss Helen Courtright. Mrs. Bartlett extended a very cordial welcome and then read some clever original verses on the activities of a doctor's wife.

At two P. M. Mrs. Harris, our state president, called the annual meeting to order and presented Mrs. Kiefer, our first president. Mrs. Kiefer gave a brief talk on the work of county and state auxiliaries and then introduced Mrs. G. Henry Mundt, of Chicago, who is the state organizer for Illinois as well as a member of the board of directors of our national organization. Mrs. Mundt gave a most interesting and informative talk on medical economics, which all doctors' wives should have heard. Mrs. Mundt suggested that we enlighten ourselves as to bills coming up in the legislature, see that our members are given strategic positions in clubs where bills are discussed so that both sides of the question are presented; our auxiliaries should have occasional meetings with the medical societies; keep our eyes open to see to what organizations we are contributing, and in clubs know for whom we are voting, and whether they are friendly to the medical profession. She suggested that we let our friends

know that the American Medical Association broadcasts health talks, and do what we can to suppress quack health programs; suggest to club women that they use the package libraries from the health departments; place Hygeia instead of Physical Culture in offices, also that we should read the Medical Journal ourselves; be sure to enlighten ourselves regarding state medicine; read and know what medical science has done in stamping out disease. "We can do much toward spreading information to the benefit of medical legislation. Let us join hands in helping our own profession." Mrs. Mundt held her audience every minute of the time and we were all sorry when she brought her talk to an end.

Mrs. Harris continued the meeting, naming Mrs. E. L. Peterson, of Jackson, vice president pro tem. Credentials committee, Mrs. Bartlett, made a report of eleven delegates present.

Secretary's annual report was read and accepted. Treasurer's annual report was read and accepted.

Mrs. Peterson was asked to take the chair while the president made her annual address.

REPORT OF THE STATE PRESIDENT, SEPTEMBER, 1929, TO SEPTEMBER, 1930

Your State President begs leave to submit the following report:

Continuing the work begun and mothered by Mrs. Guy Kiefer, your first, and for two years your president, was in itself a difficult matter. Her untiring work, especially intelligently done, owing to being in as close touch as she was with State Health, her friendly attitude and ability to visit various parts of the State, made her especially valuable. Obviously the best way was to continue along her lines of work with developments here and there as the auxiliary grew.

In June, 1927, when the State Auxiliary was organized at Mackinac by Mrs. Caroline Bartlett Crane, there were about 100 members, while today we are credited with 648. However, there are also 3,495 physicians in the state and taking it for granted that most of them have some family connections, we can see that there is still a great field for work. Every county medical society member should be represented in the corresponding woman's auxiliary by every eligible woman, and there should be such an auxiliary in every county for them to belong to. "In Union There Is Strength" and the strength of an organization is measured largely by its numbers.

To increase our membership is now one of the aims of our society. With this fact in view, Mrs. Kiefer was deemed eminently fitted to take a new office, that of Organization Chairman. She has been able to add Oakland county to our list and at the present time two other counties are about to join us. At present we have in our membership, Bay, Barry, Calhoun, Ingham, Jackson, Kalamazoo, Oakland and Wayne. Our very substantial gain now puts us, as far as membership goes, in the class with Pennsylvania, which has 1,894 members, Texas, 1,173, and Minnesota with 774. Evolution time and progress are slow. While our progress may have been slow, we feel that it has been a healthy growth, and that we are developing along various lines.

Two other new standing committees have been created during the past year; that of Hygeia being taken by Mrs. H. M. Bartlett of St. Joseph and Publicity by Mrs. P. R. Urmston of Bay City. As Hygeia is published by the American Medical Association, is a health magazine and contains articles well written and of general interest, we feel that there should be a great deal for this chairman to do in taking care of your renewals or new subscriptions which you could secure for your doctors' offices, for hospitals, libraries or reading rooms.

The other office of Publicity Chairman was created

after much thought and concern about getting the news of the Auxiliary to the members. The State Medical Society very generously offered us space in their journal which we use each month.

At first the State Board members endeavored to fill that space, but that was not altogether satisfactory. It is customary in the States and National Organization to have such an officer so Mrs. Urnston accepted that appointment. We urge every county to coöperate with her by sending reports of any or all meetings, any special activities or suggestions to her. If the space will not permit their being used immediately they can be held over. We feel that this is a very important branch of our work and we beg of you not only contributions but perusal of the magazine as well.

Do you ever see the magazine and would you read it if it were mailed to the house? This is a point for discussion later.

A great honor came to Michigan—Detroit, in particular—in being in June able to entertain the American Medical Association Woman's Auxiliary. Many members throughout the State took advantage of that fact to visit the meetings and social affairs planned and carried out by Mrs. Basil Connelly and Mrs. Burt Shurly.

In March your president and Mrs. Basil Connelly of Detroit were appointed to the National Social Committee by the Chairman, Mrs. Southgate Leigh. Many letters have been written during the year, many unanswered, some returned. Circular letters have never been sent out but we believe it is a good idea. In connection with this matter of letter writing may I urge you *always* to sign your husband's initials, for in every sense of the term are we an Auxiliary and it is by your husband's name that you are identified, or, if a sister, please indicate that. A number of the societies have been visited and by so doing we have been brought into a little closer touch with the individual members, which is both pleasant and helpful.

In closing, may I add this bit of advice, to make it one of your regular duties to attend every meeting of your own local society as well as the State Conventions. Only in this manner can you keep in touch with the work of the Auxiliary. In some cities the county meetings are open to the wives of members who make a point of going. In others, the Auxiliary meetings are planned to take place on the same evening but at a different place from the Medical Society's regular monthly meeting. It has been the experience in every part of the country, we are told, that where auxiliaries have been organized, attendance at the medical meetings has increased, especially if the meetings are held at the same time.

As one of the objects of the Auxiliary is to promote acquaintanceship among physicians' families that fellowship may increase, you may use the society to effect a closer tie with your neighbors in the profession. Unity of purpose and association in service will help to develop us into one large family in the profession in Michigan.

Respectfully submitted,
MRS. L. J. HARRIS.

Motion was made and seconded that the president's message be placed on file.

Annual report of state organizer, Mrs. Kiefer, was made and accepted.

Annual report of Hygeia committee by Mrs. Bartlett was made and accepted.

Report of the national meeting of the Woman's Auxiliary to the American Medical Association held in Detroit in June, 1930, was made by Mrs. Peterson.

The eighth annual meeting of the A. M. A. Auxiliary opened Tuesday, June 24, 9:30 A. M., Roof Garden, Hotel Tuller, Mrs. Geo. H. Hoxie, President, presiding.

Invocation was made by Dr. John Hoag of the Baptist church.

Mrs. Elmer T. Whitney, acting president of Wayne County Auxiliary, welcomed the auxiliary members and guests. Response by Mrs. John O. McReynolds of Dallas, Texas. Mrs. McReynolds, who is a past president of the American Medical Association Auxiliary and has done a lot of organizing in state and county auxiliaries, stressed the importance of county auxiliaries, as they are necessarily the foundation of the state auxiliaries. She divided the work into three factors, social, philanthropic, and educational. Choice of officers is most important, some one interested in the work and willing to devote time and thought to it. Honest and unselfish service is an attainment. Auxiliary members must not assume any medical politics as it will break it to pieces. Advised having a medical council, three or five physicians, men with vision to be selected by the medical society or council.

Mrs. Basil Connelly of Detroit, chairman of arrangements committee, spoke on the wonderful co-operation she had received from her committees, sixteen in all, and what they had accomplished through the press and at the hotels.

In the absence of Mrs. B. R. Shurly, chairman of the entertainment committee, Mrs. Connelly told of the plans of that committee, which included a trip to the Ford industries and Greenfield village each morning at 9:30; Tuesday afternoon, tea and health pageant at Detroit Museum of Arts; Wednesday morning and afternoon, style show at Kerns; Wednesday evening, complimentary tickets to the Middle Watch Detroit Civic Theatre; Thursday, a trip to Grosse Pointe Gardens and a trip to Belle Isle Park, tea at the Casino; Friday, trip to Cranbrook in Bloomfield Hills, Geo. Booth estate, entertainment in Grecian Theatre arranged by Miss Jessie Bonstelle of Detroit Civic Theatre, Carillon Bells to be played, also trip to Detroit Zoological Park; Saturday, complimentary trip to St. Clair flats.

The 1929 Portland, Oregon, rules of convention of delegates was adopted. Minutes of the seventh annual meeting read and approved, Mrs. A. J. McConnack, Louisville, Kentucky; Secretary-Treasurer Mrs. Fred L. Adair of Minnesota reported a balance of \$1,544.36 in the treasury after a complete demonstration of the budget on the bulletin board.

Mrs. Hoxie's report came next with Mrs. Frank Cregor in the chair. Mrs. Hoxie gave a very fine address. She stressed self education, health promotion and disease prevention in rural districts, urged the auxiliaries to help promote county libraries and the older auxiliaries to help the newer ones. She suggested that space be arranged for in Medical Journals and closer coöperation between State and National Auxiliaries. There should be no orders from National to State nor State to County, only coöperation, national chairman to act as clearing house. She thought the A. M. A. should give more help to the State. No legislative work should be done by the state except at the request of the Medical Society. All officers spoke of Mrs. Hoxie as an untiring worker.

Mrs. Frank Cregor, first vice president and organizing chairman, reported 10,220 paid members in 37 organized states. In her book that she was turning over to her successor, she had a map for each organized county shaded to show the membership percentage. I mention this just to give you an idea of the vast amount of detail work the national officers are doing. Mrs. Cregor suggested that the county fiscal year conform with the national, which

I think is March 31st, and that every woman accepting office should answer letters promptly, should send in reports complete, and sign her husband's name in full, not her own. She also said that less than two-thirds of medical men are members of the A. M. A.

Mrs. Allen Bunce, Atlanta, Georgia, chairman of printing and publicity, suggested that each state appoint an editor, one that will work and not be aggressive, and that medical society and auxiliary officers' names be printed on inside cover of Journal.

Mrs. M. P. Overholser, St. Joseph, Missouri, chairman of public relations, said that the auxiliary should have a member on every Parent-Teachers Association to aid in public health work, and on all club programs where possible and should also secure the interest of the County Red Cross nurse.

Mrs. A. B. McGlothlan, St. Joseph, Missouri, Hygeia Chairman, advocated working through schools, libraries and clubs rather than individuals. In some states the Y. W. C. A. is much interested. Hygeia has a paid circulation of 85,000. Seventy per cent of the subscribers are laymen and approximately 30 per cent doctors. Gain in circulation in 1929 was 10,000. Income was sufficient to pay all costs of publication and leave a net gain of \$10,000.

Luncheon Tuesday 1 P. M. in the Arabian Room of the Hotel Tuller. The tables were beautifully decorated. Mrs. Walter Freeman acted as toastmaster. Luncheon was served to about 700 guests. Dr. Percy Morgan, president-elect of American Medical Association, suggested helping to guide the charity organizations which are beginning to overrun our communities. Should have auxiliary members on their programs.

Dr. Charles Mayo of Rochester, Minnesota, spoke of the responsibility of educating the public in rural milk inspection, milk that the country child drinks. He always starts his talks to the public on diseases of plants as an illustration. He feels that each educated person should give back to the world more than his education has cost him. He told of his development of an experimental hog farm which he turned over to the city which brings in an annual income of over \$30,000.

Dr. Harris, American Medical Association president, and Dr. Upham, chairman advisory committee, also spoke. Mrs. Freeman, who made a very charming toastmaster, introduced the officers of the American Medical Association Auxiliary.

Wednesday, election of officers was held.

Mrs. Frances Connelly was made a director and Mrs. Eleanor Whitney legislation chairman.

Thursday morning the last meeting was given over to discussions. One rather warm one was whether each state president should submit a report at the annual A. M. A. meeting. It was decided in the affirmative, time limited to three minutes. It was also decided to allow the national president something like \$600.00 for traveling expenses. Another suggestion was that the auxiliary members write their state representatives when there was an important bill before the house, but need not sign their name as doctors' wives.

The program arranged by the social committee was very enjoyable. A trip to the Ford plant and Greenfield Village proved to be interesting as well as educational. The pageant and tea at the Museum of Arts was very nice. Marie Dressler in The Middle Watch at the Detroit Civic Theatre was an outstanding feature of the social program.

The trips to Grosse Pointe Gardens and Cranbrook were very delightful, our only regret was the short time allotted for each place. The gardens were gorgeous while the visit to the Chapel and entertainment in the Grecian Theatre at Cranbrook arranged by Miss Bonstelle was especially entertain-

ing. The playing of the Carillon bells after we were all seated in the busses for the return trip was a gracious farewell. The hostesses accompanying each bus added greatly to the enjoyment of the trip.

Report of publicity committee by Mrs. Urmston was made. She urged that we send in all news articles possible for the woman's page in the Journal.

A letter from Mrs. Hunsberger, president of the national organization, and one from Mrs. McReynolds regarding publicity chairmen, were read.

Reports from the following county auxiliaries of the activities during the year were given:

Bay County
Ingham County
Jackson County
Kalamazoo County
Oakland County
Saginaw County
Wayne County.

In Mrs. Whitney's report for Wayne County she suggested the advantages of an Advisory Council for every auxiliary.

Mrs. Harris complimented Mrs. Connelly of Detroit on the efficient work she had done to make the national meeting in Detroit a very great success.

After all reports were in, Mrs. Harris asked for the discussion of problems. Discussion followed as to whether request should be made that the State Journal be mailed to the homes rather than offices. Mrs. Rupp made the suggestion that at national conventions we have a state day as well as the large luncheon for all. She also suggested that we have advisory committee for all auxiliaries. Mrs. Connelly suggested that we have a regular routine report given annually from each county auxiliary as to number of members, dues paid, etc.

Mrs. Harris suggested that members see that their secretary has a copy of the state constitution and by-laws so that they may familiarize themselves with its provisions.

Mrs. Tappan of Holland said they had been organized for two years but had never had any communication with the state auxiliary.

The nominating committee with Mrs. John Smith of Jackson, chairman, made the following report:

For president—Mrs. L. J. Harris, Jackson.

For vice-president—Mrs. J. Earl McIntyre, Lansing.

The president asked if there were any nominations from the floor. Mrs. Connelly asked that nominations be closed. Motion was made and seconded that the rules be suspended and the secretary instructed to cast a unanimous vote for the names as presented by the nominating committee. Motion carried. Vote cast.

Mrs. Harris then thanked the members for the splendid support they had given her and also thanked the ladies of Benton Harbor and St. Joseph for the very fine entertainment and welcome extended to all visiting ladies.

Mrs. Urmston suggested that a fund be created, not to exceed one hundred dollars, for the expense of the state organizer in traveling over the state. Motion seconded. Motion and second withdrawn.

Mrs. Kiefer made a motion that the expense of the state organizer be reported and paid by the state treasurer up to the amount of one hundred dollars. Motion seconded. Carried.

Motion made and seconded that ten dollars be sent to the national treasurer for receipt books. Carried.

There being no further business motion was made to adjourn.

MRS. J. EARL MCINTYRE,
Secretary.

THE DOCTOR'S LIBRARY

TEXT-BOOK OF ANATOMY AND PHYSIOLOGY FOR TRAINING SCHOOLS AND OTHER EDUCATIONAL INSTITUTIONS. By Elizabeth R. Bundy, M.D. Sixth Edition revised and enlarged by S. Dana Weeder, M.D. 226 Illustrations. P. Blakiston's Son and Company, Inc., 1012 Walnut St., Philadelphia, Pa.

In the sixth edition of this book the general character of the original and the method of presentation of the subject matter have been preserved. However, recent knowledge, based on clinical observation and investigation in the field of physiology, has been incorporated. The chapter on articulations has been rewritten and the lymphatic drainage has been more accurately described in accordance with these newer facts. An interesting feature is the inclusion of clinical and surgical notes to demonstrate the practical application of the knowledge of anatomy and physiology. These notes also stimulate an interest in the fundamental subjects. Detailed descriptions have been avoided and only salient facts have been given. In this way two large subjects have been presented in a practical and comprehensible manner under one cover including 446 pages.

REFRACTION OF THE HUMAN EYE AND METHODS OF ESTIMATING REFRACTION, including a section on the fitting of spectacles and eye glasses, by James Thorington, A.M., M.D. Second Edition, revised, 322 illustrations, 28 of which are in color. P. Blakiston's Son and Company, Inc., Philadelphia, Pa.

It may be assumed that almost everyone who says refraction is familiar with the first edition of Thorington's work. Probably there was no better handbook on the subject ever written. In the revised work will be found the latest methods of procedure and many new illustrations, also many new and renewed photographs, as well as explanatory drawings, including the modern luminous ophthalmoscope, etc. The Author's handy muscle light test, also the Author's method of exercising and strengthening the ocular muscles, the so-called "Ocular Calisthenics" or "Daily Dozen," are illustrated and described. The most modern Test Cards by Dr. J. Monroe Thorington, and a convenient Card cabinet; also a most satisfactory new Trial frame, with a convenient milled wheel, with which the patient may definitely determine the exact axis of the cylinder; these are also each illustrated and described.

A TEXT-BOOK OF HISTOLOGY. By Alexander A. Maximow, late Professor of Anatomy, University of Chicago. Completed and Edited by William Bloom, Assistant Professor of Anatomy, University of Chicago. 833 pages with 604 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, \$9.00.

Professor Maximow, at the time of his death nearly two years ago, had completed certain sections of a text-book of histology and had other sections in rough manuscript form. His colleagues at the University of Chicago by their cooperation have completed the work. Professor William Bloom has undertaken the major portion of the book's preparation with the assistance of C. Judson Herrick, who has written the chapters on the nervous system, and Dr. N. Hoerr, who has contributed a description of the adrenal bodies.

The book is primarily based upon a study of human material both as to illustrations and text but there are occasional sections dealing with comparative histology. It differs from the standard text-books by its emphasis on the functional aspects of tissues. The cytological phase of tissue structure, too, has not been ignored as is frequently the case in other American texts. In order to maintain a convenient size for the work, the embryological basis of organ and tissue structure has been condensed. This,

however, is not a fault, for the histogenesis of each organ or tissue is adequately treated.

The reader will be impressed with the completeness of the work. Not only are the minor organs, which are often ignored, considered, but attention is given the structural changes of organs correlated with functional activity.

The illustrations of tissues are clear and are supplemented by numerous diagrams and reproductions of models of organs in color. The few references given are "key references" and are well selected. A complete index adds to the value of the work as a reference.

The work deserves an enthusiastic welcome not only from anatomists and students but from the practicing physician who is interested in tissues and tissue function. The viewpoint, new to American texts, the completeness of the work, and the excellent quality of the illustrations cannot be too highly commended.—W. T. D.

DISEASES OF THE SKIN. A Text-book for Practitioners and Students. By George Clinton Andrews, A.B., M.D., Associate Professor of Dermatology, College of Physicians and Surgeons, Columbia University; Consulting Dermatologist and Syphilologist to Tarrytown Hospital; to St. John's Hospital, Yonkers; to Grassland's Hospital; and to the Broad Street Hospital, New York City. 1091 pages with 988 illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, \$12.00 net.

"I have endeavored to gather and to present, in a lucid and intelligible manner, the tried and conservative principles of dermatology with the most recent developments, to evaluate them and to correlate them into one satisfying and orderly whole." This expresses in brief the purpose of the author. One hundred and twenty-eight pages are devoted to syphilis. The chapter is a monograph in itself on the subject. Five chapters are devoted to various forms of radiation and diathermy in treatment. Chapter VII is a somewhat brief though clear statement of the use of grenz rays in treatment of skin disease. The "grenz ray" is a super-soft ray in wave length between the ultra violet and the soft X-ray. There is an extensive bibliography appended chiefly in German. Indications and technic for the use of other forms of radiation are given. A commendable feature of the work is the large number of splendid illustrations.

A PRACTICAL MEDICAL DICTIONARY of words used in medicine with their derivation and pronunciation, including dental, veterinary, chemical, botanical, electrical, life insurance and other special terms; anatomical tables of the titles in general use, and those sanctioned by the basic anatomical convention; pharmaceutical preparations, official in the United States and British pharmacopaeias and contained in the national formulary, and comprehensive lists of synonyms. By Thomas Lathrop Stedman, A.M., M.D., editor of the "Twentieth Century Practice of Medicine" and of the "Reference Handbook of the Medical Sciences," formerly editor of the "Medical Record." Eleventh revised edition. Illustrated. New York. William Wood and Company. Price \$7.50.

The above transcription of the title page gives in brief a list of the contents of this medical dictionary. The first edition appeared in 1908, since which time eleven editions have appeared. This fact alone would bespeak its wide popularity. The volume is well indexed, which is an important factor in connection with any dictionary either medical or ordinary. The cover is flexible and durable cloth binding. The paper is first class quality and while it is opaque so that words on the opposite page do not show through, the 1200 pages do not make a cumbersome book. This eleventh revision includes definitions of words recently introduced into the physics of radiology. This is broader than it might seem as stated, for radiology has come to include not only X-ray work but all forms of radiation treatment of disease. The usefulness of Stedman's dic-

tionary as a work of reference has been enhanced by the insertion of a number of new illustrative plates of first class quality. A continued effort is being made with each revision of this dictionary to standardize the spelling of medical terms. This factor will be welcomed by all who are interested in the improvement and standardization of medical nomenclature.

DIET IN DISEASE. By George A. Harrop, Jr., M.D.. Associate Professor of Medicine, Johns Hopkins University; Associate Physician Johns Hopkins Hospital. With eighty tables, sample diets and food lists. P. Blakiston's Son & Company, Inc., Philadelphia, Pa.

The work is divided into three parts, namely the requirements of nutrition; the elements of the diet, and the dietary treatment of disease. The first deals largely with the physiological aspect of the subject. In part two the author describes in detail the most generally used food substances, including also their place in nutrition. The five chapters comprising this section deal in a most interesting way with the subject. Fifteen chapters are devoted to the subject of the third section. The two chapters devoted to diet in gastrointestinal diseases are of especial value inasmuch as the dietetic is the chief factor in the management of many conditions affecting the alimentary tract. The work is on the whole one of the most practically informative on the subject that we have seen.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 10. No. 4. (Southern Number—August, 1930), 268 pages with 96 illustrations. Per clinic year (February, 1930, to December, 1930.) Paper, \$12.00; Cloth, \$16.00. Philadelphia and London.

FEEES OF PHYSICIANS VS. LAWYERS

A good deal is being said in the lay press now concerning the high cost of illness, and it seems that many of the writers have the mistaken notion that the blame should be placed upon the medical profession. Not a few writers talk about the big fees and the large incomes enjoyed by physicians, when as a matter of fact physicians on the whole are paid far less for skilled services and receive less as a direct return upon investment than those who follow any other skilled vocation.

It makes us smile to note how some writers value medical and surgical services, and we desire to remind them that from actual experience we know that when we call upon a lawyer for an opinion concerning the validity of a deed to property involving not to exceed five thousand dollars the lawyer will give his opinion inside of fifteen minutes and said opinion will cost not less than twenty-five dollars and probably anywhere from fifty to two hundred dollars depending upon the reputation and experience of the lawyer. We are sued for damages amounting to twenty-five thousand dollars, which suit is a plain "hold-up game," the defense of which requires no particular preparation, the suit lasting but three days and resulting in a favorable judgment, but nevertheless we are "stung" to the tune of \$2,500 by an attorney who charges ten per cent of the amount alleged to be at stake. Admit-

ting that the lawyer had spent a few hours preparing his brief, and parts of three days in the trial, we submit that a fee of \$2,500 is so greatly out of proportion to the fees charged by physicians and surgeons as to be positively ridiculous. The lawyer's preparation for his life work, and his expenditure of time, effort and money ordinarily does not cost one-fourth what it costs the physician to prepare for his work. The physician is lucky if he gets ten dollars for a consultation which may be the means of prolonging life, and he may get from \$150 down to nothing for an operation or for weeks of skilled attention which saves a life. The "poor downtrodden and much abused lawyer" would consider himself insulted if offered compensation comparable to that paid to the well-trained and competent physician and surgeon.

Even the veterinarian is paid more for attending the sick hogs of a farmer than the physician is paid for attending the children of that same farmer. Can it be that hogs are worth more than children?

There is room for some change of opinion concerning the value of professional services.—*Indiana State Medical Journal*.

MAGGOTS IN WOUNDS ARE MORE THAN SCAVENGERS

Something more than a scavenger reaction is behind the successful healing of wounds by the new maggot treatment, its discoverer, Dr. William S. Baer of the Johns Hopkins University, told the group of scientists gathered in Baltimore for post-graduate study of bone diseases and cancer of the bones. A specific reaction between the serum of the body and the maggot itself probably causes the healing of wounds to which maggots are applied. Just what this reaction is has not yet been discovered, he said.

Dr. Baer told how his experiences as an army surgeon during the World War started him on the investigations leading to the new treatment. Two men were brought in who had been lying in the field for seven days without food. They suffered from abdominal wounds and from compound fracture of the thigh bone. The wounds were covered with maggots. The men were hungry, but otherwise their condition was good.

In the hands of the best surgeons, the mortality for compound fracture of the thigh bone was 80 per cent. In other words, four-fifths of the persons who suffered from that condition died. In the hands of the maggots, the mortality for those two men was nothing, he found. Instead of the bad infections commonly found in such injuries, Dr. Baer found only a few harmless organisms.

For ten years he puzzled over these cases, particularly when treating children suffering from osteomyelitis. If it reaches the chronic stage, recovery is often delayed for years. Finally he tried the effect of maggots on some of these cases. In six weeks the children were entirely well. Dr. Baer has used this method on 300 patients during the last two years. All the children have recovered entirely. With adults the treatment has been successful in four-fifths of the cases.—*Science Service*.

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DIAGNOSIS IN UROLOGY: ROENTGENOLOGIC STUDIES OF THE URINARY TRACT WITH CONTRAST AGENTS ADMINISTERED INTRAVENOUSLY

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DETROIT, MICHIGAN

Personal experience in the practice of any diagnostic method constitutes the most advantageous means for a sane and sound discussion of that method, even though it be one already well established, and its tenets ready for challenge against any radical questioning. The study of the urinary tract, or, more expressly, of the lumina of the tract, by means of contrast media administered intravenously, has advanced to an amazing position, and by reason of its appeal bids fair to create much of error and conflict, and to work a definite hardship upon the clinician, and his clinical material. Intravenous urography, in my opinion, has a definite and indisputable niche in our parade of investiga-

tive measures, but bids fair to create more misrepresentation than any other individual method of diagnosis, ever introduced in urology. The independent laboratory attempting to make positive diagnoses of renal

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lesions, as based upon this method, is particularly bold and open to the strongest criticism. Having used the two successful chemical preparations as contrast agents, in a series of fifty cases, and established for myself certain obvious conclusions, I feel it worthwhile to report in exactness the conclusions which seem quite positive, and to call attention to several misconceptions which are prevalent, showing their origin, and offering explanations which have been proven correct in this small series. Naturally, our opinions are subject to change; this very uncertainty is the safe shield to protect us from too much enthusiasm for the method. Certain of the statements of those who have so brilliantly pioneered in the development of intravenous urography, have been already quite reversed.

In the first and all succeeding researches in this field of endeavor, the urologist has been the dominating figure. As soon as Volcker and von Lichtenberg, in 1905, established what we now term retrograde pyelography, they began groping for a substance which could be given by mouth, or intravenously, to produce pictures on X-ray films of the urinary tract lumina. This has been the dream of all contemporary workers in urology. Nothing was accomplished of value, until Rowntree and his associates at the Mayo clinic obtained encouraging results with sodium iodide. Volcker and von Lichtenberg had apparently dropped the idea temporarily, but the latter was encouraged to begin again, and attempted to improve the method, by means of pneumo-radiography augmenting the intravenous drug. He failed to obtain satisfactory results. Volkmann also failed after experimenting along the same lines. As rightfully stated by von Lichtenberg, Roseno, in Germany, achieved the first clinical success. We shall report our experience with his preparation, called, "Pyelognost." Stimulated, no doubt, by the latter's success, Hryntschak, of Vienna, and Lichtwitz, of Altona, in association with that great chemist, Binz, and his co-workers, and later Swick of Lichtwitz' staff, who became attached to von Lichtenberg's clinic, continued the researches which resulted in successful urography, with "uroselectan." The indefatigable worker was Swick; the one who furnished the clinical material and under whose direction the really valuable diagnostic efforts ensued, was von Lichtenberg.

To Professor Binz we owe the debt for uroselectan. As stated, the urologist has wished primarily for *intravenous urography*, and has dominated the evolution of a successful method to produce it. For interpretations, and for technical aid in the method, the roentgenologist has, of course, rendered the necessary aid.

It may be stated, with reasonable assurance, that pyelognost will not be widely used because of its relative toxicity; Roseno advises against it in many types of cases where intravenous urography should prove especially valuable. So, therefore, uroselectan, is, to date, the medium of most acceptability, and it is based upon its use that the medical profession is being taught the value of the method under discussion. Its administration, and diagnoses therefrom, are being widely advertised by general laboratories. Its sponsors feared just this thing, together with a too enthusiastic acceptance of the method, and attempts at its use by independent roentgenologists, and clinicians. Hence it has only been possible to obtain uroselectan, on the market, since June, 1930. Prior to that time many of us had access to the drug for individual work, and the utmost was attempted in the way of introducing the method cautiously, and with definite advance notice of its weaknesses as well as of its excellent possibilities. Those who were given the drug for experiment were all members of The American Urological Association, and no public reports of its use were allowed, until after full presentation of the subject, based upon nearly one thousand clinical applications, was made in this country. Unfortunately for the general profession, these reports, given at the meetings in June, 1930, of the Urological Association, in New York, and the A. M. A. in Detroit, will not be published, and available for all, for some months to come. The caution embodied in these reports, and that voiced in the articles on the subject, published abroad, is most commendable.

For the benefit of those who are interested in the chemistry of uroselectan, it may be stated briefly that it has an iodine content of 42 per cent, and is readily dissolved in water, the solution being neutral. Swick found that he could inject 180 gms. of the substance intravenously in a man of average weight without danger of poisoning. He could not recover any iodine from the blood

stream fifteen minutes after the injection in a normal subject, and 90 per cent of the uroselectan could be recovered from the urine unchanged within eight hours. Von

only if given in an inorganic ionized state. Uroselectan seems to possess the property of passing through the renal tubules and out through the urine without being changed

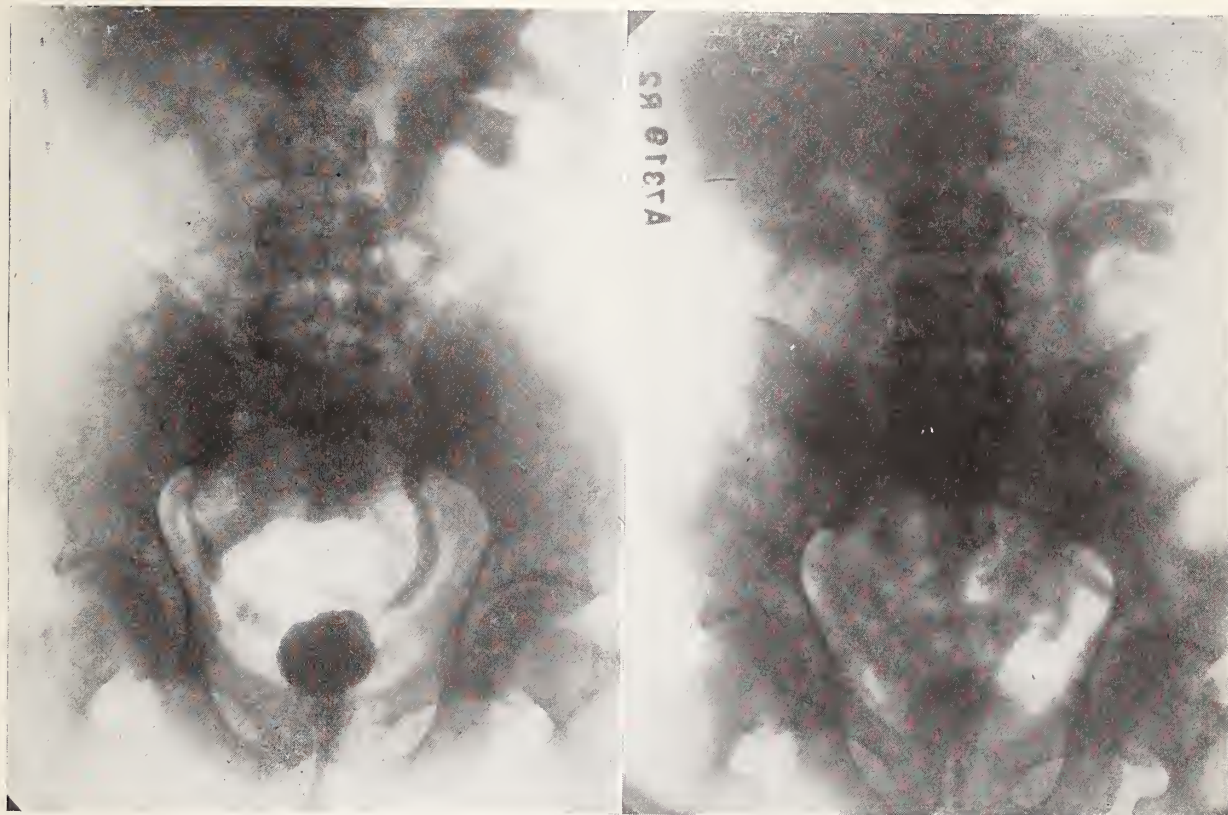


Fig. 1. A. Patient with retention due to prostatic bar; symptoms renal infection. Film made following injection of sodium iodide into bladder by catheter in attempt to obtain pyeloureterograms by reflux up ureters. Only partial success on right side. At cystoscopy, catheterization of right ureter was impossible as it opened in a deep diverticulum which does not appear on film.

B. Same case; film shows condition following use of uroselectan. Note excellent visualization of renal pelvis, entire ureters and bladder.

Lichtenberg, in his latest communication, records experimental work of Tourne and Damm, who found that uroselectan is present in the blood long after the first-determined period of fifteen minutes. They found that the uroselectan blood curve drops precipitously in the first two hours after injection, then more slowly in the next two hours, so that practically none of the drug remains after four hours. Consequently, the presence of any appreciable amount after that period indicates kidney damage. This naturally suggests a routine four hour blood estimation as a retention test. These varying findings of the pioneer observers are in line with my own assertions at the beginning of this paper, relative to the need for caution with a new method, and the radical differences already developed in this particular one.

Discussing the lack of toxicity, Kidd states that iodine in large doses seems toxic

and without giving off any ionized iodine. Herein lies the explanation as to why it does not cause iodism. In one of our own experimental cases, a young man who has a very unstable vasomotor system, following uroselectan, developed a marked coryza, and other symptoms, particularly a real urticaria; the picture of acute iodism seemed imminent but the phenomenon was only momentary. In a good many children, and in phlegmatic individuals, we have given the drug with no subjective symptom response whatever.

In addition to the production of renal and ureteral fillings making roentgenographic studies comparable to those made with instrumental urography possible, there are other features of the intravenous method of very great importance. It has produced much of evidence for the correct interpretation of renal pelvic and ureteral dynamics; the transport mechanism of the urinary tract can be intimately studied if a sufficient num-

ber of films are available in a given case. This is more particularly true if these films are exposed at regular intervals. Von Lichtenberg, especially, has stressed the value in

tions. The very dense pictures, therefore, are obtained where there is a slowing of the excretion. But this slowing must be due to poor transportation of the drug as well as



Fig. 2. Bilateral pyelonephritis. Right pelvis atypical, middle calyx absent. Film taken one hour following intravenous injection of uroselectan.



Fig. 3. Stone in right renal pelvis. Film taken 30 minutes after using uroselectan. Note dilatation of right pelvis and calices and blocking by stone; no shadow of ureter. Normal left pelvis and ureter.

these dynamic studies which relate in each individual case to the kidney function, measuring to a degree its efficiency, and, by comparison of the two kidneys, establishing the proper procedure for treatment. He speaks of the various phases in pelvic and ureteral peristalsis, of diastole and systole as the two contrasting phases, and notes that the more complete pictures with uroselectan, are obtained during a diastolic period with the various portions of the tract relaxed. On the other hand, as he points out, in systolic phases the findings may be incomplete and probably account for many disappointments in practicing intravenous urography.

Those who have had intensive experience with uroselectan find that, with normal kidney function, the concentration of the drug as eliminated in the urine is approximately five per cent. In this strength, it could not be expected to give a contrast shadow as dense as that obtained by any of the commonly used retrograde pyelographic solu-

to impaired renal function, since with kidney damage and good drainage the shadows are even less and frequently valueless for diagnosis. Also, as von Lichtenberg states, minor changes in renal function cannot be evaluated.

Hughes and Schaffhauser, assistants of von Lichtenberg, making a series of glomerular punctures after the intravenous injection of uroselectan, in frogs, found considerable amounts of iodine in the glomerular filtrate. This suggests that the greater portion of the drug is eliminated through the glomerulus, and explains why the imperfect elimination of uroselectan occurs principally in glomerular damage. One would quite naturally assume that a substance, unchanged in the blood, would filter through the glomerulus, but the fact of greater importance is that we have always considered that the dyes which we use as standard elimination tests are filtered through the tubular areas. Therefore, we

have no right to consider any estimation of the excretion of uroselectan as a parallel to our standard dye tests. The two may be complementary but such a theory will require proof.

Before an analysis of personal experience with intravenous urography, I wish to quote from von Lichtenberg's most recent report: "In glomerular damage we obtain poor or no pictures, especially in cases of pyogenic parenchymatous infections, and in many cases of tuberculosis and tumors. Conditions causing retention, which result primarily in tubular damages, give, even in advanced state, good pictures." Contrast this with the claims of certain laboratories advertising intravenous pyelography as a simple and infallible means of diagnosis of all renal conditions, normal and otherwise, and one sees the dangers in too zealous acceptance of the method, as stated above.

We have given nine (9) pyelognost injections. In one instance the dosage was incomplete due to lack of coöperation on the part of the patient, and no films were taken. Of more than fifty (50) injections of uroselectan, I shall include the first forty-two (42) in this report. Of the total of fifty cases upon whom a series of films was made, twelve (12) were considered as having no renal or ureteral pathology. They were purely experimental cases and were all studied by means of the Jarre Cinex camera, which furnishes an ideal means of obtaining a correctly taken series of films with exact interval timing, and the assurance that all phases of peristalsis will be represented. Many of the pathological cases, also, were studied with this camera, and in all instances a considerable number of films were made, the periods of taking the exposures extending over from four to twenty-four hours. The entire series is tabulated below:

Normal cases.....	12
Renal tuberculosis.....	4
Renal tumor.....	2
Lithiasis, unilateral.....	13
Lithiasis, bilateral.....	5
Carcinoma of bladder with metastases and ascending infection.....	1
Reduplication of renal pelves and ureters.....	2
Acute pyelonephritis.....	2
Prostate hypertrophy with retention.....	2
Hydronephrosis with unilateral infection and involvement of ureter.....	6
Hydronephrosis, bilateral, secondary to urethral stricture.....	1
Total	50

(Cases of ureteral calculi with partial obstruction, included in lithiasis, 6)

It may be seen at once that the method has been applied in a considerable variety of cases, and an immediate summary as to the instances in which diagnostic films were obtained, and otherwise, is in order. I will give some data relative to the normal subjects later. The cases with previously suspected pathology, later proven, totalled thirty-eight.

Cases completely diagnosed.....	14
Cases partially diagnosed, but requiring retrograde urography for final decision.....	7
Cases in which no data were obtained.....	12
Cases giving slight information.....	5
Total	38

For the cases completely diagnosed as to roentgen-ray information, and in which retrograde study may not have been necessary prior to the institution of treatment, a simple table is submitted:

Cases of lithiasis.....	7
Cases of hydronephrosis.....	2
Cases of prostatic obstruction with hydronephrosis	2
Cases of subacute pyelonephritis.....	2
Case of bilateral reduplication pelves and ureters, with infection.....	1
Total	14

For every case of lithiasis, cystoscopy was required either prior to diagnosis, or in the period of treatment. Likewise, cystoscopy was a necessary measure in all the other cases. These procedures included ureteral instrumentation for four instances of ureteral stone, two cystoscopic examinations for the determination of bladder-neck obstruction, repeated and sometimes prolonged ureteral catheter drainage for pyelonephritis with and without hydronephrosis, and, in one case, litholapaxy, comprising a total of forty-one cystoscopic operative and therapeutic manipulations for this group of cases in which the diagnosis was effected by intravenous urography.

Needless to say, the seven cases requiring retrograde pyelography also required later cystoscopic treatment, in some instances. They comprised the following group: three cases previously operated upon for stone; one case upon whom nephropexy had been performed two years previously; one case several years after prostatectomy in another clinic, presenting symptoms of renal insufficiency and infection; two cases of pyelonephritis, one suspected of polycystic disease.

For the cases in which no diagnostic data

were obtained, the following table is explanatory:

Renal tuberculosis.....	4
Renal tumor.....	2
Carcinoma of bladder with involvement of right ureter	1
Acute pyelonephritis.....	4
Prostatic obstruction, with renal calculi.....	1
Total	12

pelves of the kidneys and in the ureters was universally poor, so that only spotty urograms were obtained, even with the use of lower ureter compression. It was necessary to examine many films in order to piece out a fairly complete pyeloureterogram on either side. This circumstance seems of the greatest importance, and will give rise to



Fig. 4. Bilateral lithiasis. There is a small calculus in right pelvis (not visible in this film) which does not block the ureter. Stone obstructs lower left ureter, causing hydronephrosis and hydroureter. Film taken 45 minutes after using uroselectan.



Fig. 5. Large vesical calculus with encrusted cystitis, contracted bladder and symptoms of renal infection. Calculus formed around button. Film, taken 2 hours after using uroselectan, shows excellent pyeloureterocystogram.

In the cases with acute pyelonephritis, the pyrexia and prostration had subsided before any patient was submitted to intravenous urography.

In the group of cases where incomplete information was obtained, are included three cases of stone and two cases of enormous hydronephrosis.

The series of twelve normal patients was undertaken for the sake of physiologic data on urinary tract dynamics. The Cinex camera was used in order to obtain accurate pictorial records. It was found that uroselectan and pyelognost concentrated rapidly in the bladder, that immediate fluoroscopy or exposures, following the completion of the drug injection, demonstrated excellent cystograms. Concentration in the

most of the likely erroneous interpretations with the routine use of intravenous urographic methods. One other unfortunate occurrence in this series was the marked flatulence developing in the course of the studies following both drugs. Early films and fluoroscopy were rarely interfered with by gas, but as time elapsed, the gas shadows would become so pronounced as to ruin films entirely. While this phenomenon was more noticeable in the group of normal cases, it was a constant bother with all patients, many of whom had been previously prepared by special diet limitation, catharsis and enemata. Eserine has been suggested for use prior to intravenous urography and we have administered it in twenty per cent of our cases, but with questionable benefit.

The authors who mention the technic of administration of pyelognost, and of uroselectan, especially of the latter, have adopted the method of von Lichtenberg and Swick, which consists of the use of syringes and entails a double injection, unless one uses a very large syringe. All of our own injections have been given with a simple intravenous infusion apparatus, using at first pure gum rubber tubing, but later any standard hospital apparatus. We have always demanded saline cleansing of the glass container and tubing, and boiling in distilled water and a scrupulously clean utensil. We have seen no alarming reaction with uroselectan; one patient's coryza and urticaria was mentioned; another had transient nausea; another an intense desire to cough during and for a time after the drug was given. In one instance when an assistant was administering uroselectan, a small amount escaped outside the vein. The procedure was discontinued and no local reaction developed except a very moderate and short-lived induration. A small amount of saline is given before the drug is allowed to enter the vein and following the drug likewise. With pyelognost we observed in each instance an immediate reaction consisting of a sensation of heat throughout the body, intense pain in the arm used for the injection, marked increase in pulse rate, and in some instances nausea and headache. One patient became definitely cyanotic. The reactions were evanescent, however, and in no case alarming, although in all cases where this drug was used, the patient was a relatively well individual. In one case a severe thrombosis of the upper arm developed ten days after pyelognost was given. We have found the simple use of an infusion apparatus quite satisfactory. One further point concerning technic is of some importance, namely the question of compression over the lower ureter area for concentration of the drug in the renal pelvis and upper ureter; we have used rubber bags and sandbags, especially in our studies of normal cases, and in patients who did not give good visualization in the earlier films. We are unprepared to state the value in this method but note that considerable stress is made of it abroad. A British urologist has devised a special pad for ureteral compression, and Ziegler and Kohler mention external compression as an adjuvant to intravenous pyelography.

Mention has been made of the functional renal test value of uroselectan. We have attempted to evaluate this by means of quantitative estimation of iodine in all the voided urine for periods up to forty-eight hours, and by means of recovering the drug unchanged. So far we have secured no con-



Fig. 6. Acute cystitis and old pyelonephritis and hydro-nephrosis. Cystoscopy was impossible except with anesthesia (spinal used for therapy). Film taken 30 minutes after using uroselectan. Excellent visualization of the entire upper urinary tract.

vincing data. We do find, however, that careful estimation of the specific gravity of all voided urine is of value and is an index of some importance. Von Lichtenberg says that the rise and fall of the specific gravity shows good regularity giving important knowledge of concentration and dilution and thereby furnishing a good function test. He states that in normal kidney function the specific gravity of the urine rises to 1.050 and 1.060, and falls to 1.030, the high point being reached in the third and fourth hours after the drug is given, even though the greatest concentration of uroselectan has passed. Von Lichtenberg further states that through the work of Heckenbach it is proven that quantitative estimation of Uro-

selectan in the urine is not a sufficiently accurate clinical test of renal function.

SUMMARY

The present day conceptions of intravenous urography have been outlined in conjunction with personal observations extending over a period of six months. Fifty cases receiving intravenous contrast media have been discussed in some detail. The comparative value in practical application, of pyelognost and uroselectan in our hands, has been carefully reported.

Certain types of renal disease have been shown as promising little or no diagnostic evidence after the administration of these drugs, namely, renal tuberculosis, renal tumors, acute inflammations, and marked renal insufficiencies as portrayed by advanced prostatism.

CONCLUSIONS

1. Intravenous urography, especially with the use of uroselectan, is a safe and valuable diagnostic procedure, although adaptable for certain types of disease; it does not take the place of cystoscopy except to a limited degree. It requires the combined knowledge of the roentgenologist and the urologist, and is not a method for routine hospital or laboratory employment.

2. In normal cases the media, administered intravenously, do not concentrate with any regularity to give satisfactory evidence of anatomic outline of pelvis or ureters, even with the use of external compression over the ureters.

3. Intravenous urography gives threefold information, as pointed out recently by von Lichtenberg, viz., the relationship between the units of the urinary tract; some information, by means of the X-ray, relative to kidney function, and some evidence by chemical findings; interpretation of the renal and ureteral dynamics.

4. Intravenous urography can be used in those cases where cystoscopy is impractical or impossible, but in such instances is not always a means of diagnosis; it often serves where pyelographic solution cannot be placed beyond an obstruction in the ureter, and is of value in some instances where retrograde urography carries a risk to the patient. A long series of films, with study of same during the process of drug elimination, or interval fluoroscopic examination, give the most valuable data. Jarre's Cinex camera furnishes an ideal means of regularly timed serial exposures.

5. In an analysis of thirty-eight cases selected for adaptability to diagnosis by means of intravenous urography, less than fifty per cent were found as completely solved even from the roentgenological standpoint, and each patient was perforce subjected to later therapeutic cystoscopic procedures.

6. The best visualizations were obtained in cases with some degree of ureteral obstruction and in cases with delayed kidney evacuation time, as illustrated by a kidney with retarded function following nephropexy or nephrolithotomy. The greatest concentration of the drug occurs, in most cases, during the second hour following its administration.

CLINICAL SIGNIFICANCE OF JAUNDICE

M. A. Blankenhorn, Cleveland, asserts that the first and most important significance of jaundice is the possibility of stoppage of the ducts. To make a diagnosis of obstructive jaundice, one of the three common procedures is generally followed: 1. If there is a history of colic, one argues from cause to effect and says that the stone that causes colic obstructs the duct. 2. Tests for liver disease or tests of liver function can be done, and the finding of liver disease or disordered function excludes obstruction by substituting another cause. 3. The symptom of jaundice can be studied to see whether obstruction of the ducts alone could give such a distribution of bile pigment. He describes in detail the work that has been done in these procedures. He says that the differentiation between painless jaundice due to stone and catarrhal jaundice is often impossible;

likewise the recognition of arsphenamine jaundice when there has been abdominal pain. No progress in the problem is in sight, if all the measuring and testing are done in the obscure and doubtful cases. It is clearly the duty of the surgeon to write more about obstructive jaundice to aid in the problem. He sees no help from the physician, who seldom handles obstructive jaundice. He sees no help from the physiologist or the biochemist. It is his aim to emphasize the value of methods as they now stand; viz, the icteric index and the examination of duodenal contents and feces, when applied to clear-cut and uncomplicated obstructive jaundice. With better information of the common, one can hope to deal with the uncommon. Instead of the surgeon receiving help from the physician in the problems of jaundice, it is clearly the duty of the surgeon to furnish this help to the physician.—*Journal A. M. A.*

HEAD INJURIES*

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DETROIT, MICHIGAN

The subject of Head Injuries is one of interest not only to the neurologist and neurosurgeon, but to all other physicians and surgeons as well. There is hardly a practitioner of medicine in any of its branches who does not at some time during his practice come in contact with patients with cranial trauma. For this reason it would seem that a discussion of the problems connected with the management of injuries of this type is well justified.

In order to present this subject systematically, I have thought it advisable to arrange some form of a classification. All cranial injuries, as we know, do not fall into the same group as far as treatment is concerned, hence the following arrangement has been made for convenience in taking up the various types separately:

1. Scalp abrasions without laceration, without skull fracture.
2. Scalp lacerations without skull fracture.
3. Skull fracture without symptoms of intracranial injury, without depression.
4. Skull fracture with symptoms of intracranial injury, with or without depression.

In addition to these four main types of injuries, we might include others, such as (1) intracranial injury without external evidence of trauma, or (2) intracranial injury without skull fracture with or without external evidence of trauma. These, however, while not infrequently seen, are not as common as the rest, and a detailed discussion of them will be omitted in this paper. It will suffice to say that, upon the recognition of brain damage, when external evidence of violence is absent, careful examinations and observations, as described later, will indicate the proper method of treatment to be carried out.

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SCALP ABRASIONS WITHOUT LACERATION,
WITHOUT SKULL FRACTURE

This kind of injury is no doubt the one most frequently seen, and for which little, if anything, is done. Most of us will recall many such cases, where a patient was brought to the office or hospital with a history of a slight fall or blow upon the head, and who, after cleansing the skin with an antiseptic solution and perhaps applying a small dressing, was promptly dismissed. Nevertheless, because we are dealing with a potentially infected wound, we should not only ask the patient to return for further dressings and observation, but also administer a prophylactic dose of five hundred to fifteen hundred units of tetanus antitoxin as a precautionary measure. It is also well to make a general and neurological examination. In addition, anterior-posterior and lateral views of the head should be made with the X-ray in order to rule out the possibility of a skull fracture. I do not believe it is necessary to do a routine spinal puncture in these cases, but only in those where intracranial injury is seriously suspected. Moreover, before dismissing the patient from our care, it is advisable to inform him and his relatives of the possibility of further trouble. Objection may be made to this on account of the possibility of a post-traumatic neurosis, but, if carefully handled, a complication of this nature will be avoided. It is more important, I believe, to protect ourselves against future embarrassment, which is apt to occur if we do not guard the prognosis.

SCALP LACERATIONS WITHOUT SKULL
FRACTURE

In these cases, as in the preceding ones, there are several possibilities. However, on account of the presence of the open wound

we are not liable to dismiss the case so lightly, although frequently we content ourselves with cleansing the wound, suturing and dressing. It is obvious that these may also represent a part of that group with delayed symptoms, and who might place us in a very embarrassing position if they should return seriously ill within a few hours after we had dismissed them with an unguarded prognosis. Therefore, I feel that it is extremely wise to examine these patients very carefully before administering final treatment. To this end the following routine is suggested:

After excessive bleeding from the wound has been temporarily controlled, X-ray pictures of the head should be taken, and a general and a neurological examination made. If no fracture is demonstrable on the X-ray plate, or by examination, and the results of all other examinations and tests are negative, the wound may then be repaired. This may be done in any one of several ways, according to the wishes of the surgeon, although observance of the following principles is recommended: (1) that the wound edges are carefully shaved and the surrounding skin cleansed with an antiseptic solution; (2) that all foreign material and devitalized tissue have been completely removed; (3) that the inside of the wound has been thoroughly washed with tincture of iodine or some equally powerful antiseptic; (4) that the open ends of all severed vessels have been securely tied, and (5) that the wound is closed with ample drainage, either by the insertion of a competent drain, or the placing of sutures far enough apart and loose enough to allow free seepage between them. While many surgeons prefer no drainage and complete closure, on account of the possibility of secondary infection, I feel that it is far better to establish drainage to the exterior than to run the risk of including potentially infected material within the wound. The extreme vascularity of the scalp and the anatomic relationship of the covering structures to the skull are additional reasons why we should drain lacerations in this area. The application of a tight bandage after closure is made will aid in avoiding hematoma formation. After surgical repair is completed, the usual prophylactic dose of tetanus antitoxin should be given, and the patient allowed to remain under observation as previously suggested.

SKULL FRACTURE WITHOUT SYMPTOMS, WITHOUT DEPRESSION

The general mode of attack in these cases is the same as that for injuries to the scalp alone, excessive bleeding from the wounds being first controlled, followed by the routine X-ray, general and neurological examinations. As soon as the X-ray report has been received and the presence of a fracture demonstrated, a spinal puncture should then be done to determine the condition of the spinal fluid. If the fluid is not under increased pressure, and free from blood, and there are no demonstrable neurological signs as well as no areas of definite depression in the skull, repair of the scalp may then be carried out in the same manner as previously described. Nevertheless, on account of the fact that a fracture is present, these patients should be observed closely for a period of twelve to twenty-four hours, and should remain in the hospital from ten days to two weeks. Following this, if no unusual symptoms have developed, they may be allowed to go home. At the same time, a period of rest at home should be advised, and they should be cautioned against excessive stooping, straining and heavy lifting. They may be permitted to return to their work after six to eight weeks, or longer, depending largely upon the nature of their employment and the development of any subsequent complications. If compression symptoms develop at any time after the injury, further treatment is indicated. On the other hand, if bloody spinal fluid is encountered upon lumbar puncture, the institution of daily spinal drainage with limitation of fluids and dehydration is suggested. This will be discussed in detail under fractures with intracranial injury.

SKULL FRACTURE WITH SYMPTOMS OF INTRACRANIAL INJURY

It is in these cases where careful management is very important and where surgical intervention is often necessary. For this reason the symptoms, diagnosis and treatment will be taken up separately.

Symptoms.—There are many signs and symptoms that may be present in a patient with a fractured skull with intracranial injury. In order to emphasize their presence and significance I will enumerate the ones which I consider quite important, together

with an explanation, in most of them, as to why they occur:

1. A disturbance of mentality or consciousness, in which the patient may be extremely restless, disoriented, confused, drowsy, stuporous or comatose. It has been said that the usual sequence of events is, first, a period of temporary stupor or coma, followed by a so-called lucid interval when the mental picture is often quite normal, and, later, a second attack of unconsciousness which may or may not finally disappear. Various types of mental reaction, as well as combinations of them, may be present at any time. The mental derangement and coma occurring early are frequently due to the immediate shock from the injury, while the later mental status is probably associated with irritation and pressure.

2. Headache, usually severe, not always well localized, continuous or paroxysmal and with or without vomiting. The headache present soon after the injury is doubtless caused by the irritation produced by the blow itself, while later it may be indicative of increasing intracranial pressure. If the vomiting is of the projectile type, the latter condition should be suspected. The so-called post-traumatic headache which develops after days or weeks is probably of a different character, although extremely persistent and severe; and is due, in most instances, to a combination of absorption of devitalized brain tissue and blood and a disturbance of the normal absorption and circulation of the cerebrospinal fluid.

3. Active bleeding or evidence of bleeding from the eyes, ears, nose or mouth. This is usually associated with fracture at the base of the skull, with involvement of the middle meningeal or internal carotid arteries, or with laceration of the superior longitudinal sinus, the lateral sinus, the torcular area, the cavernous sinus, or their tributaries. In the former case the sudden onset of symptoms, particularly acute when the internal carotid is torn, is indicative of the rapid rise in pressure of arterial bleeding; while in the latter case, the slower progress of compression will suggest to us venous bleeding. On the other hand, hemorrhage coming directly from any one of the larger dural sinuses may follow a course just as rapid as bleeding from a severed cerebral artery. At the present time there seems to be a growing tendency toward the belief that venous lacerations following cranial trauma

are much more frequent than actual arterial tears. In any event, the presence of additional damage to the throat and to the organs of the chest and abdomen must be considered before the real significance of bleeding from the mouth or nose alone can be determined.

4. Drainage of cerebrospinal fluid through the nose or ears, which may or may not be associated with hemorrhage. This would indicate fracture at the base with extension into the subarachnoid space. In fractures of the anterior fossa the cribriform plate of the ethmoid is usually involved, while in middle fossa fractures communication to the exterior is brought about by the extension of the bony break into the cavities of the ear through the petrous portion of the temporal bone. The presence of clear fluid in the external auditory canal does not necessarily mean that we are dealing with subarachnoid drainage until a chemical analysis has shown that it is not perilymph. However, it is far safer to consider it to be the former until proven to be the latter.

5. Abrasions, contusions and lacerations of the scalp, with active bleeding or hematoma formation. While one or more of these are usually present, a fracture of the skull or a severe concussion may occur without any external evidence of trauma.

6. Depressions of the skull, as determined by inspection and palpation, or later by X-ray examination, and which, in many instances, may be masked by an overlying hematoma.

7. Edema, as well as hemorrhage, within the structures of the orbit, with ptosis or proptosis of one or both eyelids. It is often difficult to determine at the outset whether this is due to blood or spinal fluid, or both, but the possibility of its being the latter must be kept in mind. A fracture of the orbital wall might injure the arachnoid and cause extravasation of cerebrospinal fluid to occur.

8. Subcutaneous emphysema of the face and scalp. Fracture extending into the accessory nasal sinuses is responsible for this condition.

9. Anesthesia or paralysis of one or more extremities, usually present on the side opposite to the injury, and may be progressive, retrogressive or stationary. It is not infrequently observed, however, due to the closed, fixed cavity in which the brain is

placed, as well as the direction in which the force is applied, that contracoup injuries take place and in which ipsilateral signs are present. Pressure over the cortex or destruction within the brain itself will account for these symptoms, although the presence of additional injury to the extremities locally must be taken into consideration before stating that the trouble is intracranial.

10. The presence of aphasia, early or late, partial or complete, indicating pressure upon or destruction to Broca's area in the inferior frontal convolution. It is quite universally accepted that this center is located on the left side in right handed individuals and on the right side in left handed individuals, although there is still some controversy on this point. The presence of a bilateral speech center has even been suggested. The exact knowledge of its location is extremely helpful in determining the location of the lesion.

11. Involvement of several cranial nerves, as shown by a disturbance of the sense of smell, limitation of motion of the eyes, facial weakness, inability to masticate or swallow properly, etc. While other locations in the brain might be responsible for individual losses in function of these nerves, massive or group involvement suggests peripheral injury associated with fracture at the base and basal hemorrhage.

12. Abnormal pupillary reactions. It has been said in the past that the so-called Hutchinson's (dilated) pupil, due to direct third nerve pressure, should be found on the side of the injury to the brain. On the other hand, it is common to find a constricted pupil on the side of the lesion in the early stages, while later on it may become dilated and immobile. Moreover, it is not at all unusual to have no pupillary change, or bilaterally dilated or constricted pupils at any time after the injury. Therefore, we cannot always rely on the pupillary phenomena as being an index to the affected side of the brain.

13. Edema of the optic discs or the presence of retinal hemorrhage. The choking of the discs is usually a late manifestation, occurring after from twelve to twenty-four hours, and is usually indicative of increased intracranial pressure. Retinal hemorrhages may be found associated with the papilloedema, or may be present independently as a direct result of the injury. In the latter case their presence will be noted early.

14. Fluctuation of the blood pressure, pulse, pulse pressure, temperature and respiration. All variations of these occur, from the early stage of shock with low blood pressure, slow pulse, subnormal temperature and slow, deep, labored respirations, through the stage of reaction with rising blood pressure, increased pulse, elevation of temperature and increased respirations, to the terminal stage, in fatal cases, of low blood pressure, rapid pulse, extremely high temperature and rapid, labored and irregular breathing. The latter picture is one to be avoided, and, upon the presence of persistent elevation of blood pressure, treatment, whether medical or surgical, should be instituted at once.

15. Bloody cerebrospinal fluid on lumbar puncture. When this is present, hemorrhage into the subarachnoid space and ventricular system of the brain has occurred, provided the spinal cord and its membranes have not been injured, and may be due to injury to the intracranial vessels from fracture at the vault or base, as well as from gross injury to the brain itself.

DIAGNOSIS

The diagnosis of a skull fracture with intracranial injury is not always easily made, and particularly of intracranial injury without skull fracture. Many symptoms and signs which are present here may be found in other conditions; for example, the period of coma due to concussion or compression may simulate that found in acute alcoholism, diabetes, uremia, apoplexy, epilepsy, opium poisoning, or even in brain tumor. Furthermore, the paralysis, anesthesia and aphasia might easily point toward spontaneous hemorrhage within the skull associated with vascular disease. However, with a history of severe trauma to the head; the drainage of blood and cerebrospinal fluid from the ears, nose or mouth; together with X-ray evidence of the presence of a fracture of the skull, very little difficulty should be encountered in making the proper diagnosis. In the absence of definite symptoms in the beginning, and with the presence of only a few suggestive ones, extreme care must be taken that a serious injury is not overlooked. It is far better, in my opinion, to be over-cautious in handling a minor scalp laceration, than to overlook the dangers associated with a fractured skull.

TREATMENT

There are many methods of handling fractures of the skull with intracranial injury, and most of them possess a great deal of merit. At the present time opinions are divided as to just when and when not to operate. The results obtained in some clinics where surgical treatment is often used seem to parallel quite closely the reports of others where surgery has been reduced to a minimum. From my own experience, both while in training and in practice, I have reached the conclusion that no hard and fast rule can be made, but that the progress of each patient is the controlling factor of the type of treatment to be used. On the other hand, it is usually well to have a systematic routine which may be applied to all cases in general, in order that too much time is not lost in attempting to decide what to do. Therefore, the following suggestions are offered as a rational procedure to be followed in handling the various problems encountered:

1. If the patient is first seen in a condition of shock, the usual treatment of this condition should be carried out, such as absolute rest in bed, with opiates if needed; the application of heat externally; the administration of cardiac and respiratory stimulants; the subcutaneous injection of fluids, etc. If an unusual amount of blood has been lost, a blood transfusion combined with stimulation is in order. The value of these, however, is only temporary, as increasing the blood volume and the force of the heart beat only tends to increase the hemorrhage internally, if this is present, since the bleeding points have not been controlled. Also, the condition of shock in these cases is often produced by serious injury, and the location and extent of that injury should be determined. While emergency measures are often necessary in the beginning, the routine examinations and tests should go on without delay, and the patient be prepared for surgical interference, in case the latter should prove to be indicated.

2. If a large hematoma of the scalp is present, with or without skull fracture, and without depression, and, if the results of the neurologic examination do not reveal signs of local compression, whether the spinal puncture shows blood in the spinal fluid or not, I believe it is best to follow the course of conservative management and delay sur-

gical procedures until more definitely indicated. In this case the patient should be placed flat in bed and treated as follows: (1) the fluid intake should be restricted to less than 1,000 c.c. daily, including all nourishment given by mouth, by vein or by rectum; (2) dehydration should be effected, first, by the use of a hypertonic diet, consisting of orange juice, grape juice, ginger ale, broth, milk, etc., secondly by the intravenous injection of hypertonic glucose, 250 c.c. of twenty per cent or 50 to 100 c.c. of fifty per cent, depending upon the rapidity of dehydration and amount of fluid desired, and lastly, proctoclysis of ten per cent glucose alternated with retention enemas of two ounces of magnesium sulphate in four ounces of water; (3) spinal drainage should be instituted daily and fluid in amounts of 30 c.c. to 50 c.c. removed at each sitting, attempting to keep the intraspinal pressure within normal limits (if bloody fluid is present, drainage should be continued daily until the fluid is clear); (4) medication by mouth in the form of acetylsalicylic acid, pyramidon and codeine may be given at regular intervals of three to four hours for headache and restlessness, combined with the hypodermic injection of codeine if oral administration fails or is not practical, and, (5) after the expiration of the twelve to twenty-four hours, when clotting should have occurred, aspiration of the hematoma under strict aseptic precautions is advisable. This may be repeated as often as necessary until the scalp remains flat.

This regime should be continued over a period of from one to two weeks, at the same time watching closely for any indication of compression signs, in which case operation would be advisable. After all symptoms have disappeared, the measures of treatment may gradually be replaced by a normal routine and the patient sent home for the remainder of the convalescence. At the same time, it is well to direct all subsequent activity for the next few weeks, or months, and to be on the lookout constantly for a return of symptoms.

3. In the presence of a demonstrable depression in the skull, in which the inner table is definitely misplaced inward, exploration is usually advisable. While some surgeons prefer not to elevate depressions without focal signs, I feel that the operation itself is not of sufficient magnitude to contra-indicate its use to avoid the possibility of distressing sequelæ. Exploration may be

carried out in one of two ways: (1) either through the original laceration, if one exists, enlarged and extended to give ample exposure, or (2) through a separate incision made near the border of the depression. The individual case will determine the method of choice. All depressed fragments should be slowly and carefully elevated, detached bony spicules and foreign material gently and completely removed, and after ligating all visible bleeding points within the skull, closure made as in simple laceration of the scalp. Excessive manipulation of the brain and its coverings should always be avoided. Post-operative treatment should consist essentially of the same measures as in non-operative cases, namely, rest in bed, limitation of fluids, dehydration and spinal fluid drainage. The blood pressure, pulse, temperature and respirations should also be taken at regular intervals during the first twelve to twenty-four hours after operation, and the power and sensation of the extremities and face, as well as all other signs of localized compression, carefully noted. In the absence of the recurrence of increased pressure, further treatment is directed toward a gradual return to a normal routine, the patient being allowed to go home after ten days to two weeks. It is also necessary in these cases to direct the diet and amount and type of activity permissible after leaving the hospital.

4. In the absence of a depression of major importance, if we have reason to believe that compression is developing in the middle or anterior fossæ, the most serious of which is arterial or large sinus bleeding, exploration may be carried out through the so-called points of election in the fronto-temporal and post-parietal areas. If the internal carotid has been severed, death will have occurred before an operation of any sort could have been performed. On the other hand, if the middle meningeal artery has been injured, which is said to occur frequently where the anterior branch passes upward at the junction of the greater wing of the sphenoid and the anterior-inferior angle of the parietal bone, and where often a distinct bony canal is formed, an approach through this region would be desirable. It has been stated that this area is located on the exterior of the skull at a point one and one-half inches behind and one inch above the zygomatic process of the frontal bone. Therefore, a vertical incision, inclin-

ing slightly forward, made over this point for a distance of two to three inches, with subsequent trephining of the skull beneath, would allow us not only to explore the anterior branch, but, in addition, to determine the presence or absence of extradural or intradural bleeding. Furthermore, by simply enlarging the incision and the opening in the bone, we could examine the posterior branch, as well as the main trunk of the artery itself. If further exploration of the posterior branch is desired, an additional incision could be made in the post-parietal area, over a point which is represented externally by the junction of a line extended posteriorly from the supra-orbital ridge, known as the supra-orbital line, and one directed upward from the posterior border of the mastoid process. If a break in the artery is found in either location, it may easily be ligated or closed with a silver clip. If however, the walls of the artery are intact throughout, and no bleeding is seen either outside or inside of the dura mater, no further exploration is necessary. In addition, the value of a large decompression is questionable, as the sudden release of pressure would only tend to promote increased hemorrhage within. On the other hand, whether the artery is intact or not, if the presence of extra-dural or intra-dural bleeding is established, further surgery is warranted. This may be accomplished by turning down a large osteoplastic flap over the fronto-parieto-temporal area, using the previous incisions as the anterior and posterior limbs of the flap, or by utilizing the original incisions to form a skin flap in order to perform a subtemporal exposure. Through either opening the clot could be removed. However, if the source of the hemorrhage is the superior longitudinal sinus or its tributaries, the bone-flap method would give better access to the bleeding point, and, I feel, should be used, in spite of the fact that many surgeons are very reticent about using this type of exposure in the treatment of skull fractures. A small decompression should be made at the base of the flap to allow for post-operative swelling. If the operation is performed through an entirely clean wound, complete closure of the scalp could be made with interrupted silk sutures in the temporal muscle, temporal fascia, galea and skin. The insertion of a drain should be left to the judgment of the surgeon. On the other hand, if a portion of the wound has been

previously contaminated by the injury, a closure of interrupted silkworm sutures would be preferable. Drainage in the latter case would be advisable. The post-operative treatment should be carried out as in depressed fractures, and the length of time required for the patient to remain in the hospital would depend upon the rapidity of the convalescence and the severity of the injury.

5. In fractures of the base of the skull, above or below the tentorium, with an abundance of fresh blood in the spinal fluid, as well as the drainage of blood or cerebrospinal fluid to the exterior through potentially infected areas, the value of early surgery is a matter of conjecture. Severe hemorrhage in the posterior fossa will probably have produced death by pressure upon the vital centers before operation could be considered. In addition, slight bleeding in the same region is quite frequently taken care of if the patient overcomes the immediate reaction. If the hemorrhage is in the middle or anterior fossæ, with drainage to the exterior, it would also be advisable to omit early surgery. It is more important to protect the draining points against further contamination, in which case nasal douches and syringing of the ear should be avoided, and the patient should be cautioned against sneezing and blowing the nose. Spinal drainage through the posterior cistern or by lumbar puncture is contra-indicated in these cases. Limitation of fluids and dehydration are advisable. Rest and quiet are very essential and should be brought about, if necessary, by the use of opiates. Elevation

of the head of the bed is also recommended until after all drainage from the nose and ears has ceased. If recovery occurs, and the patient is permitted to go home, the usual restrictions as regards his personal activity should be particularly stressed.

COMPLICATIONS

Among the various complications incident to cranial injuries, are (1) meningitis, (2) cerebrospinal fluid fistulæ, (3) external hydrocephalus with cortical atrophy, (4) traumatic cephalalgia, (5) chronic sub-dural hematoma, (6) neurasthenia, (7) epilepsy, (8) paralyses, deafness, blindness, etc. It is obvious that our purpose in the treatment of these cases should be to avoid these sequelæ. The improvement in methods of treatment in the future will do still more than we are able to do at the present time toward a satisfactory management of all head injuries, and the avoidance of serious complications.

MEDICO-LEGAL ASPECT

Before leaving this subject it must be emphasized that all cases of head injuries have a rather large medico-legal significance, and, in view of this fact, it is quite important that extreme care be taken to protect ourselves with accurate and complete records of all details connected with their management.

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For many of the principles underlying the methods of treatment outlined, the author is indebted to Doctor A. W. Adson, Doctor W. McK. Craig, and Doctor J. R. Learmonth, of Rochester, Minnesota.

HYPOTHYROIDISM

Louis M. Warfield, Milwaukee, reviews the clinical pictures of hypothyroidism. He says: Mild to severe grades of hypothyroidism (not myxedema) are common among persons living in a goiter region such as the Great Lakes basin. All classes of people are affected; a considerable proportion are professional men and women. Both underweight and overweight as well as normal weight are found among the patients. The most important single symptom is an undue sense of fatigue, a physical exhaustion which often leads to a neurasthenic state. Other frequent symptoms are constipation, susceptibility to mild infections such as coryza, various aches and pains, and, in women, scanty or profuse menstruation.

General abdominal soreness, especially along the colon and in the right iliac fossa, is frequent. Diagnosis cannot be made without evidence of a low basal metabolic rate, as there are no pathognomonic symptoms or signs for the mild hypothyroid state. Differential diagnosis must be made from other endocrine gland failures, especially suprarenal, posterior pituitary and ovary: from such chronic diseases as (1) occult or incipient tuberculosis, (2) diabetes, (3) chronic nephritis, (4) pernicious anemia and other blood diseases. Rheumatic aches and pains and headaches of a migraine type may be due to thyroid failure. Thyroid extract can only normalize the nutritional needs of the body and should never be administered to reduce weight in individuals with normal thyroid function.—*Journal A. M. A.*

MALNUTRITION IN CHILDREN*

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One of the most common findings in our pediatric practice is that of the malnourished child. The frequency of malnutrition is hardly conceivable until we note from statistics that approximately one-fifth of all of our school children are suffering from this malady. It is estimated that there are approximately 5,000,000 cases of malnutrition excluding the infant and pre-school child.

In order to get a better understanding of what we mean by malnutrition, a definition of normal nutrition is perhaps in place. Nutrition is primarily the ingestion and digestion of foodstuffs, but more than this it concerns itself with body growth and the maintenance of health, which are adjusted to the individual needs. By normal nutrition we not only mean normal weight but include the following: (1) absence of physical defects, (2) proper state of mind, (3) adequate amount of sleep and rest, or in other words, proper health habits and hygiene such as:

- (a) properly balanced diet
- (b) proper elimination
- (c) correct posture
- (d) abundance of sunshine and fresh air
- (e) sufficient physical exercise
- (f) proper education in personal and home hygiene.

So when we speak of malnutrition we are referring to a deviation from the normal of any one of these factors. The pediatrician is well aware of the child who is up in weight, yet presents the picture of the tired child, poor appetite, anemia, disinclination to play, and physical fatigue. A better term than the malnourished child is probably the physically unfit child.

According to Emerson, there are five causes of malnutrition: (1) physical defects, (2) overfatigue, (3) lack of home control, (4) improper diet, faulty food habits, and (5) faulty health habits.

Diseases in the parents do not seem to have a definite bearing on malnutrition in the offspring. There seems to be a definite seasonal variation, more cases being found

in the Summer and Fall months of the year. Emerson believes 40% of all undernourished children lack proper sleep. This coincided with Seham's statement, "All malnourished children are tired children." From his extensive work, Seham believes that malnutrition is most commonly caused by insufficient hours of sleep, excessive physical and mental activity, improper hygiene and other unnatural living habits. It is a common observation of pediatricians that the malnourished child is indifferent, fidgety, irritable, lacks emotional control, is a poor concentrator, and may even later become socially unadaptable. The frequent association of chronic fatigue and malnutrition has led to the expression, "the fatigue-malnutrition syndrome." The constitutional and hereditary makeup of these children, no doubt, plays an important role. It has been noted by numerous observers that the energy reserve of these children is very low. They easily become exhausted, apathetic, lose their appetite and finally become malnourished. Some of us will probably recognize this as the neuropathic child or the emotionally unstable one.

From this discussion, we see that malnutrition in children resolves itself into two main types, the organic and the functional; the latter being without organic defects. The number of physical defects in the malnourished is found to be higher than in the normal child. Further, the correction of these defects cures a certain percentage of malnourished children. Hence, we can conclude that there is a certain relation between malnutrition and physical defects.

Some of the most common physical defects in malnourished children in their order of frequency are: (1) dental caries, (2) cervical adenitis, (3) diseased tonsils and adenoids, (4) secondary anemia, (5) poor

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posture, (6) pre-tuberculous-tracheo-bronchial-adenitis, and (7) defective vision. The less common findings are simple goiter, defective hearing and orthopedic defects. Still the margin of increase of the number of organic defects found in the malnourished child as compared with the normal child is so slight that it is a poor means of diagnosing malnutrition. For example, it has been found that the percentage of positive tuberculin reactions is the same in the malnourished child as in the general child population, and that latent tuberculosis is found as frequently in the well nourished child as in the malnourished.

Thus, we can understand that the functional, the primary or essential, type of malnutrition is the more important of the two. Holt observed two types that belonged to this group. First, the dull, listless, and easily fatigued; second, the hyperkinetic, the excitable, the hyperactive. Blanton found numerous nervous symptoms in children suffering from malnutrition, such as headaches, habit spasms, insomnia, or even choreic manifestations. Lydia Roberts tried to explain these findings on the basis that the developing nervous system in the child needed a certain amount of covering of fat to protect it from external stimulation.

Due to lack of adequate food material, the malnourished child lacks the proper protection of its nerves. The Sehams have shown by their experiments on rats that poor nutrition is associated with excessive activity and that hunger causes activity or nerve stimulation. They found that there is a definite relation between weight loss and activity. Inanition in rats produced irritability, restlessness, and blinking of the eyes. They further concluded, from studies among underweight children, that symptoms of nervousness, fatigue and physical exhaustion were more common in children ten per cent or more below the normal height-weight index. Perhaps our most accurate means of gauging malnutrition at present is the relation of body weight to height according to the Baldwin-Wood determination. Seven or ten per cent above or below the average is considered abnormal. In these tables, the weight is correlated with height and age, but fails to include social or racial differences which may influence weight. Further, Robertson has found the normal weight variability to be from ten to twenty per cent, and the normal height variability from

four to six per cent. Therefore, the use of these tables by inexperienced workers will lead to false conclusions.

From these observers we are led to conclude that proper diet in conjunction with the establishment of normal health habits and personal hygiene will determine our ability in overcoming this important type of malnutrition. When we speak of a proper diet, we mean one not only quantitatively adequate, but qualitatively adequate as well.

It is a common observation among pediatricians that the diet of the malnourished child is as a rule high in carbohydrates, sometimes fats, but generally deplorably low in proteins, minerals and vitamins. In other words, it consists mainly of starchy foods and milk, with very few vegetables, fruits and cereals. Some of the dietary indiscretions of malnourished children are, (1) irregular meals, (2) sweets between meals, (3) use of tea and coffee, (4) omission of milk and cereals, (5) omission of vegetables, (6) insufficient amount of food in twenty-four hours.

We are beginning to know more about vitamins. The vitamins which we know to be essential for the growth and development of the child are the two fat-soluble vitamins A and D; the antineuretic vitamin B, the growth or antipellagric factor B₂, the antiscorbutic or C vitamin, and finally the E, or the reproductive vitamin. Vitamin A is referred to as the growth, or antixerotic vitamin and is found abundantly in cod liver oil, fats of milk, egg yolk and glandular organs, leafy vegetables, carrots, spinach, and to a less extent in bananas and the pericarp of cereal grains. Vitamin D, or the antirachitic vitamin, is found in association with vitamin A. The chemical nature of vitamin D is definitely established now as being a sterol closely related to cholesterol known as ergosterol. The richest sources of ergosterol appear to be yeast and ergot, which when exposed to ultraviolet radiation becomes physiologically active. The preparation on the market is standardized to have the vitamin potency 100 times that of U. S. P. Cod Liver Oil. The water-soluble vitamin B has been separated into two factors, vitamin B, and B₂, the antineuritic factor and the growth and antipellagric factor. It is found abundantly in yeast, egg yolk, most vegetables, whole cereals and fruits. The effects of deficiency in vitamin B are lack of appetite, slow growth followed by weight decline,

lack of tone of skeletal and intestinal musculature, and ultimately a condition of polyneuritis or beriberi. Vitamin C is found in abundance in the citrous fruits, tomatoes, onions, and cabbage, to a less extent in bananas, apples, lettuce and string beans.

A deficiency of vitamin C causes irritability, lack of energy, diminished resistance to infection, and ultimately may cause scurvy. Vitamin E, or the fertility vitamin, is found in maize oil, butter-fat, lettuce and to some extent in cottonseed and olive oil. This vitamin not only influences the process of reproduction, but also the metabolism of iron and the promotion of blood regeneration after anemia. There are probably numerous other vitamins, which we know nothing about, that influence nutrition and body growth.

But the giving of an adequate diet alone will fail in treating malnourished children, unless we also establish proper health habits. It is for this reason that so many undernourished children who are free from organic defects do so remarkably well in a convalescent home, under a simple regime: (1) adequate diet, (2) proper rest with perhaps extra rest periods during the day, (3) attention to the hygiene of the intestinal tract, (4) moderate amount of outdoor play, and (5) systematic physical examinations. In other words, the home environment of these children plays a major role. It has been said the malnourished child does not know how to relax, he is muscle bound. This accounts for the success of the forced feeding rest cure in these children, in which it is found that under this regime their nervous symptoms are improved, their functional capacity increased, and ultimately their weight curve is increased. Anorexia can frequently be overcome by establishing the proper psychological background for eating. It is needless to say that emotional strain from grief, anger, worry, or excessive irritation, influences our normal appetizing

mechanism considerably. Physical strain in a similar way influences appetite as explained in a previous paragraph. Hence, the supervision of the personal hygiene and activity of these children is as important as their diet.

From this brief survey of the subject, we can readily see that malnutrition in children presents a complex problem and why our therapeutic procedures often fail in private practice. The common practice of giving tonics and appetizers is perhaps greatly overdone by all of us. It should play a very minor part in our treatment. The reduction of malnutrition in our children will depend not only upon the correction of all physical defects with the removal of foci of infection, but upon the re-establishment of normal health habits. Teachers and parents must be fully educated along health lines before we can hope to see results in the malnourished child. In the past, we have concerned ourselves entirely with the physical development of the child and have ignored the mental and social development. The establishment of parent-teacher organizations, pre-school clinics, nursery schools, health-habit clinics and the like will aid this work considerably. On the other hand, we must not ignore the fact that prophylaxis in the physical development of the child is necessary for his normal psychological development. While we have concentrated our efforts on the physical growth of the child, we have lagged to some extent in his mental development, and this, no doubt explains the widespread occurrence of malnutrition in the school child.

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BLOOD PRESSURE READINGS IN 1,000 CASES OF NORMAL PREGNANCY*

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The inspiration for this study did not lie in the thought that blood-pressure readings are being slighted in the care and observation of expectant mothers, but rather because it was felt that most textbooks and the literature on the subject give the readings too high for normal pregnancy. It has not been uncommon to see patients in the clinic who stated that they had been under some physician's care for "low blood pressure" during their pregnancy and had been taking various tonics and stimulants to raise this pressure. It was really the thought of finding where the dividing line between low, average and high blood pressures lay, that prompted this study.

In selecting a thousand cases for study, the following requirements were laid down:

1. All cases must be clinically normal. If a blood pressure reading coincided with sudden increase in weight, macroscopic edema or albuminuria, the case was classified as toxemic and thrown out of consideration. Cases with heart complications also were not included.

2. Each patient must have been under prenatal supervision long enough to secure five or more readings. A total of 7,180 blood pressure readings on 1,000 patients were secured. The blood pressure readings were made by one of six physicians who were in the department during the time these patients were observed. The auscultatory method with a standard mercury column sphygmomanometer was used routinely. The majority of the readings were taken as part of the routine prenatal examination with the patient lying down and with the cuff around her right arm. The cuff was distended until the mercury column was raised above the point where all sound disappeared. The air was allowed to escape slowly until the pulse sound was audible again, and the height of the column at that point was taken as the systolic blood pressure. The air was allowed to escape further until the sound disappeared completely and this point was taken as the diastolic blood pressure.

In collecting the datum and preparing it for study, the readings were tabulated finally by using the nearest number evenly divisible by five as the actual reading, in order to

facilitate the mathematical procedures necessary. Thus a clinical blood-pressure of 112/78 would be tabulated as 110/80 or one of 123/77 would be tabulated as 125/75.

The first finding of importance was the fact that in 41 patients the first blood pressure taken was from 5 to 20 points higher than their average readings. It was felt that in these patients the excitement and nervous tension coincident with the first examination was probably the cause for the single rise in blood pressure. There was a slight rise in diastolic pressure in only eleven of the same 41 patients, demonstrating that the diastolic pressure is probably not affected by nervous causes as readily as the systolic.

The patients were then arranged according to age with groupings every fifth year from age 16 to 45. Each five year group was then averaged as follows:

AGE	NUMBER IN EACH AGE GROUP	PER CENT	AVERAGE SYSTOLIC	AVERAGE DIASTOLIC
16-20	40	4.0	109	63
21-25	234	23.4	107	71
26-30	400	40.0	109	64
31-35	233	23.3	114	71
36-40	81	8.1	117	71
41-45	12	1.2	119	76

From these groups it appears there is a maximum difference of 12 points for the systolic pressure between any two age groups—the lowest being 107 points for the 21-25 year group and the highest being 119 for the 41-45 year group. There is a gross difference of 13 points in the high and low groups of diastolic pressure averages. The low average here is in the 16-20 year group and the highest average is again found in the 41-45 year old class.

When we examine the difference in consecutive groups, there is a slow gradual rise according to age in the systolic averages,

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while the difference in diastolic averages is even less marked. I feel that with a much larger group such as 1,000 patients in each age group, the differences would have been much smaller. For instance, in the 41-45 year group only 12 patients were available for study after all conditions were met, and it happened that several of those who were not included because of only 3 or 4 readings instead of the required 5, had very low averages.

The patients were then divided as regards parity and of the total number 421 or 42.1% were primiparas and 579 or 57.9% were multiparas. The respective average blood pressures for these two groups were:

Primiparas	.....421.....	109.5/68
Multiparas	.....579.....	111.0/68

These averages show an almost unappreciable difference with the systolic averages 1½ points higher among the multiparas and no differences at all in the diastolic. This is not in accord with Cornell's findings entirely, since he found a slow steady increase in blood pressure according to the number of pregnancies the patients had passed through. However, in his figures he considered all cases, including toxemias, and since he had a considerable higher number of blood pressures over 140 among the multiparas, the result was changed considerably.

The systolic averages were then classified according to the number of each falling into consecutive 5 point groups, thus:

Number of systolic averages in each 5 point division			
70-75	7	0.7	
76-80	21	2.1	
81-85	33	3.3	
86-90	35	3.5	
91-95	81	8.1	
96-100	107	10.7	
101-105	111	11.1	
106-110	95	9.5	Grand average of all systolic readings 110.44
111-115	82	8.2	
116-120	151	15.1	
121-125	178	17.8	
126-130	56	5.6	
131-135	23	2.3	
136-140	20	2.0	
Total	1,000	100%	
Number of diastolic averages in each 5 point division			
Below 45	67	6.7	
45-50	78	7.8	
51-55	81	8.1	
56-60	128	12.8	
61-65	123	12.3	
66-70	133	13.3	Grand average of all diastolic readings 68.16
71-75	111	11.1	
76-80	118	11.8	
81-85	89	8.9	
86-90	72	7.2	
	1,000	100%	
Grand average pulse pressure—41.28			

These averages do not mean that all of the readings on one patient would be the same as that patient's average. It was observed however that in the lower blood pressure averages these readings were often very close together. Thus in the group that individually averaged around 75/45, consecutive readings were often the same or they varied only a few points. In the higher averages, however, individual consecutive readings often varied as much as 15 points.

Studying these groupings again, it is seen that in the systolic averages the largest single group is the one of 121-125 systolic pressure with 17.8% of all readings falling in this group and the second largest group being immediately below it with 15.1% between 116-120. This means that the total of these two groups, 32.9%, or ⅓ of all patients, fall between 116-125 systolic.

There were only 8.1% or 1/12 of all the patients studied whose systolic pressure actually corresponded to the grand average. Or dividing the readings at 100, it is found that 71.6% of all systolic readings averaged were above 100, while 28.4% were below.

Studying the diastolic groups in the same way, much less difference is noted and the grand average coincided with the largest group while over 60% of all the averages fell between 56-80.

It is to be regretted that more of these patients had not been studied when they were not pregnant so that comparison between normally pregnant and non-pregnant individuals could be made. The very great majority of these patients came to the hospital for obstetrical care only and if they happened to be patients before or after their pregnancy, routine blood pressure readings were seldom taken, if the first blood pressure was normal. Several authorities have stated that blood pressures are usually slightly lower during normal pregnancy than for the same individual non-pregnant. Cornell, in the July American Journal of Obstetrics and Gynecology, discusses this and gives an exhaustive bibliography. Another study that would be instructive is the tabulating of all pressures according to the period of pregnancy in weeks. It has been stated by Cornell that there is a slow gradual increase in blood pressure during pregnancy and it is felt that many of the extremely low pressures are seen during the first few months of pregnancy when lassi-

tude and nausea are common. However, in none of the patients with extremely low average pressure was there a report of shock occurring at delivery and the few cases of shock that we have observed after delivery, where the shock itself was out of proportion to the amount of blood lost, length of anesthetic or operative trauma, occurred in patients who had higher blood pressures with some toxemic symptoms.

Conclusions:

1. In 1,000 cases of normal pregnancy studied, the average blood pressure readings, both systolic and diastolic, were lower than that given in most textbooks.

2. There is probably a slight increase in average blood pressure readings of pregnant women according to increase in age.

3. Parity has little, if any, effect in increasing blood pressure in pregnancy.

4. Three-fourths of all normally pregnant patients have an average systolic blood pressure over 100.

5. Many patients have a systolic blood pressure of less than 90 during pregnancy and, if the constitutional causes are excluded, no treatment is necessary. There is no reason for fearing shock after delivery because of the previous low level of the blood pressure.

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IS THE WRITING OF PRESCRIPTIONS BECOMING A LOST ART?

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The following remarks are presented, not that they are expected to add to the advancement of medical and surgical knowledge, but to review in brief the changes that have been gradually taking place during the past forty years or more in the art (if it ever could be called an art) of prescribing for patients. A prescription does not necessarily mean a written order for compounding medicine, but includes all directions for the welfare of the patient. I am led to write this paper by recalling one written quite a number of years ago entitled, "What Shall We Prescribe?" Many of the things said then, have come to pass but who at present can forecast the future?

I was fortunate, during my college days, in having as preceptor a man who actually taught materia medica and therapeutics. He loved his work and tried to instill into the minds of his students as much of the subject as was possible for the average medical student, who at that time was not very enthusiastic about this branch of medicine. We were thoroughly drilled in the study of drugs, including those of botanical or mineral origin. The principal stress was placed on the action of drugs on the animal or human organism, also the use of these drugs in certain pathological conditions in which they were indicated. We were taught what action to expect in diseased conditions and

might look for favorable results, provided, of course, the diagnosis were correct and we were made to realize that diagnosis was the great factor in the practice of medicine. Hospital records of postmortems have proved it a fact that it is not easy at all times to make a correct diagnosis. The profession is improving, due to the more thorough preparation as well as to accurate instruments and methods of diagnosis. A case is recalled where the patient had seen several physicians and had told them he had "piles"; an ointment or suppository was the form of treatment used, with unfavorable results. Examination revealed a crop of venereal warts which were removed and the patient cured of his so-called "piles." Many have met with these conditions and probably have been at times somewhat derelict in thoroughness of examination.

We were taught and shown the drugs we were to use in practice, what 20 grains of bismuth subnitrate looked like and what bulk a quarter grain of morphine sulphate occupied; this was for the benefit of those

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who were to practice in the country and of necessity had to dispense their own remedies; also the city doctor learned that he could not prescribe 20 grains of bismuth subnitrate to be placed in a capsule that would hold only a few grains of the drug. Prescription writing was a hobby of the teacher, and students were drilled thoroughly in it. The students were cautioned against the so-called "shot-gun" prescriptions which were written often in the hope that some one of the many ingredients would hit the mark. A prescription composed of base, adjuvant, corrective and vehicle plainly written was the object sought. How many of us have realized the importance of legible writing? I recall a case where a druggist telephoned a physician and wished to know the quantity of the first drug written on the prescription blank and the reply was "that it was the name of the patient and not anything to be included in the prescription." We were taught to rely on the old and tried preparations and to look with suspicion on the newer ones until their worth had been proven by clinical tests. Many will recall the untoward effects of acetanilid when it was first used in too large doses.

The embryo physicians were taught to treat patients quickly, safely and pleasantly but the latter condition was very often overlooked and some nauseating concoctions were given to patients who shuddered as the time for the next dose appeared; here our homeopathic friends stepped in and showed us the way to pleasant medication. Children would take their sugar pellets and solutions without any hesitation. Tablet triturates came into use and also many preparations made up by reliable drug houses and unpleasant medication to a very great extent was eliminated.

While a student, on the way to the office of my preceptor I passed the office of a homeopathic doctor which was usually crowded with patients. As to his ability I cannot say, but he had a very large practice and one reason was, that he dispensed his own medicines. When the supply of medicine was exhausted the patient was compelled to return to the doctor for more medicine and his condition noted and the treatment was changed. It also added to the finances of the doctor. This of course savors of business and the practice of medicine is supposed to be humanitarian—a serv-

ice to the unfortunate. Yet it seems to me that the majority of the doctors in the past did not pay enough attention to the business side of their work, as seen by countless sums of unpaid bills and many thankless patients. The present day doctor does not neglect this important aspect of his professional work as it is absolutely necessary in order to keep him up to date in all things that are needed to practice medicine and surgery successfully. Many physicians provided themselves with a stock of remedial agents suited to their needs and did their own dispensing. This procedure did not please the druggists, who said that physicians, if they did not have on hand what the patient really needed would substitute and the druggists of course were never guilty of such a breach of trust!

The old saying, "short accounts make long friends," may very nicely be changed to "quick recovery makes a grateful patient." In one state, at least, the druggists attempted without success to have a law passed that would prohibit a physician from dispensing any medicine except in cases of emergency.

A few words concerning drug stores: How many real ones are there today? They are practically department stores with a side line of drugs. In Detroit there are, however, a sufficient number of reliable stores where a physician may have his prescriptions filled accurately. There are few stores open all night and the physician if he does any night work must carry some remedies or send miles for what is needed at the time. I do not know the custom of this Republic (Panama) but am acquainted with the method carried out in Cuba and consider it an excellent one. Certain stores are open each night and the public is made aware by notices in the daily papers or telephone guide of the ones open in different parts of the cities. This plan might be adopted with advantage in the larger cities of the United States.

Now the detail man with his samples of preparations comes upon the scene, samples that will cure anything from acne to zoster, and some of us fall for the wiles of the high pressure salesman, for that is what he really is, by handing out to our patients the nice little samples, without removing the labels. When the patient thought he needed something of the same nature did he return to the physician? No, he went to the druggist

and a patient was lost. Refilling of prescriptions is a common practice. Patients who have been benefited by some form of treatment pass the bottle or box to their friends who are supposed to be suffering from the same malady as the original owner of the prescription. And so we have the pernicious habit of self-medication. After the physician has been thoroughly samp'ed and, like a sponge, squeezed dry, these medical concerns frequently begin advertising in the newspapers and magazines. The laity conclude that the remedies must be good because a physician had given them the same.

It is time for the profession to wake up and pin their faith on the old time preparations, that, like old friends and old wines, are reliable. There are, we all know, a large number of reliable manufacturing houses who are placing on the market for the use of physicians, ethical preparations and I do not refer to them disparagingly; they are a real help to those who prescribe their products. I do protest, however, against those firms who have worked the physician and then advertised their goods to the public by means of magazines and newspapers, with the idea that they have been endorsed by the medical profession. We see in the larger cities the automatic restaurant; in drug stores machines for vending stamps, gum, perfumes and other articles. Would it be looking too far into the future to imagine a machine in which a specified coin might be dropped into the slot and a remedy for headache, rheumatism and other troubles obtained? Household cabinets are sold and they contain a supply of medicines with a list of diseases, their symptoms, the proper remedy to use in each case.

Today the physician is somewhat hampered in the use of what he may think is beneficial to his patient. Only a certain amount of alcohol may be used legally within a certain period. I believe this is unjust.

If a physician does not advocate its use, that is his own view of the matter. I have often wondered why a lawmaker should limit the amount of alcohol a physician may prescribe.

Is the writing of prescriptions becoming a lost art? Through the courtesy of a number of druggists I am able to give the following data. These druggists have looked carefully over a large number of prescriptions on file and I have tabulated them into three classes.

	Per cent
First—Remedies contained in the pharmacopeia	54
Second—Proprietary and pharmacopeia	17
Third—Proprietary remedies alone..	29
	<hr/> 100

Prescriptions in the first class were written usually by the older physicians and the second and third classes by the more recent graduates. Not that the latter are incapable of doing otherwise, but perhaps they have drifted into the habit of using proprietary preparations to save time, or have been beguiled by ostentatious advertising. My firm belief is that the profession should use the old and tried remedies and keep away from the newer ones until they have been approved by the Council on Pharmacy of the American Medical Association, and not until then should they be included in our armamentarium.

It has come to a fine condition of affairs when proprietary houses send literature to the physician indicating when and how to prescribe their preparations and even suggest that a printed prescription be cut out and pasted on the prescription pad or memorandum book for easy reference. Physicians should be able to prescribe for their patients without the suggestions of many commercial houses.

THE RELATION BETWEEN THE PHYSICIAN AND INDUSTRY*

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The adoption of the Workmen's Compensation Act, now effective in forty-four of the forty-eight states and passed in Michigan at a special session of the Legislature in 1912, marks the beginning of a definite relationship between industry and the practice of medicine. Rapid strides of industrial progress and scientific achievements of late years are largely responsible for the great changes in these two fields, now affecting the state, the community, the employer, the employee, the physician and that important group—the casualty and liability insurance companies. More recently it has come to involve the *families of the employees*. Legislative departments are required to do additional work of an analytical and formulative nature, and community interest is more and more being drawn into the cause. New problems are constantly arising as conditions alter themselves. Some of these much discussed questions are insurance companies, fee schedules, contract practice, factory clinics, hospital clinics, arbitration boards, state supervision of industrial hygiene clinics, uniformity of record forms and rehabilitation.

INSURANCE COMPANIES

When the Act first became effective, the insurance companies primarily represented the employers' interests. They inaugurated various policies controlling industrial practice, collected and compiled statistical information of great value by reason of having had previous experience in other states where compensation laws were already in force, and made suggestions resulting in the standardization of policies and the adoption of safety measures that have since insured greater protection for the employees. With the growth of industry and the experience of the insurance companies, improved methods of treating cases resulted, which have greatly reduced the morbidity and mortality rate of injured employees and lessened their length of disability. While the situation has been largely dominated by the insurance companies, much credit is due them for their contribution in making the law successful in its application and in modifying it from what it was in the beginning. To them must also go the credit for most of the economic

studies that have been thus far made in the field of industrial medicine.

With the exception of the larger industrial corporations, the employer has usually existed as a secondary participant, conforming to the legal requirements of the law and otherwise acting almost entirely upon the recommendations of the insurance company. Problems involving the physician or employee have usually been referred by the employer to the insurance company for settlement. The employee is the one most vitally interested and benefited by the Compensation Act, and yet he is usually the most inactive. Through societies and associations, employees occasionally make complaints and suggestions to their employers, who subsequently present them to the insurance companies for analysis. The individual employee at times may become quite harassing and frequently resorts to legal means to secure additional compensation or to settle disputes arising in the adjustment of claims.

Until recent years, the physician has usually attended cases which presented themselves for treatment at the request of the employer. It was then the custom to render service and charge fees according to the physician's own judgment. There was little occasion for criticism on the part of the employee, employer or insurance company. With the growth of industry, improved methods of treating injuries, the necessity for preserving the health of employees and the economic experience of the insurance companies, has come the demand for better industrial practice, resulting in the specialty known as "Industrial Medicine and Surgery."

In order to cope with the situation, primarily controlled by the insurance companies, organized medicine has found it necessary to establish a close contact between

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insurance companies, employers and employees. In a measure, this is being accomplished through committees of the American Medical Association, State and County Societies. The Civic and Industrial Relations Committee of the State Medical Society is vitally interested and has always had, as its chief function, the study of all problems of civic and industrial nature affecting the physicians of Michigan. With the increase in the number of these problems during the past year, the work of this committee has been quite extensive. At the beginning of 1929, it was the request of the Executive Committee of the Council of the State Society that a study be made of certain problems affecting the physicians of Michigan and their relation to industrial clinics and insurance companies. During this study, the committee uncovered a number of conditions which at present need investigation and careful analysis. It appears that this can best be done by physicians who are engaged in industrial practice, and certainly so by an organized association of such physicians. They are the ones who are constantly in the fields where certain specific complaints are originating. A misstep in any direction, without careful, complete analysis, may establish a precedent in the relationship between physicians and industry, from which it will be extremely difficult to recover without some degree of professional embarrassment. At present there is an urgent necessity of a liaison between physicians and insurance companies, inasmuch as the latter represent not only themselves but also the employer and employee, and are in a position to offer much statistical proof for their arguments.

FEE SCHEDULES

The oldest and most discussed question is that of fee schedules. At present there are thirteen states which seem to have "official medical fee schedules adopted by Workmen's Compensation Boards" and nine states which have "unofficial medical fee schedules." The Michigan Commission has no fee schedule. Disputes between employers, employees, and physicians are settled on the merits of each case as the circumstances warrant. Attempts in the past to solve this question have been subject to considerable criticism and proposed schedules have been discarded. In 1919, the present Secretary of the State Medical Society

submitted to the profession a fee schedule for use in industrial cases, which appeared fair in theory but its practical application met with disfavor. It is difficult to regulate medical services by a standard charge and yet the law of averages applies in most cases. For instance, a flat charge of \$2.00 for all office dressings must of necessity cover the dressings for an extensive and severe burn as well as that for a simple laceration. Insurance companies object to the latitude which must be given to the physician. They contend that it is obviously difficult to regulate overcharges and agree upon a satisfactory fee.

Physicians are not above criticism in this respect. One of the complaints made by insurance companies is that physicians are charging for dressings for simple lacerations, dressing the case every day and sending a total bill for an amount far in excess of that actually required. Insurance adjusters have cited cases in which they have paid certain physicians in this state as high as \$45.00 for attendance of simple lacerations of the fingers without sutures. In one such case, I personally know that two or three dressings were all that was necessary. Such unfair advantage taken by physicians is bound to react unfavorably upon the whole profession.

Upon inquiry, a number of insurance companies state that fees for re-dressings at the office in this state range from \$1.00 to \$5.00, with an average of \$2.00 per dressing. This schedule is without respect to cities and outlying districts, some of the largest fees being charged by country doctors and some of the smallest by men specializing in industrial surgery. Fees charged for specific operations, of course, depend upon the type and extent of service rendered and the responsibility taken by the attending surgeon.

Insurance adjusters state that it is very difficult to interpret serious injuries from the type of report sent in by attending surgeons and suggest that physicians be more explicit as to description of injuries and treatment rendered, when making reports, and also to state whether the injury is compensable or non-compensable. Insurance companies depend upon these reports in making settlements of claims and payment for physicians' services. There is a certain type of insurance adjuster who attempts to dominate the situation and dictate to phy-

sicians just what their charge shall be. He is the one who quotes frequently "in my company's experience" and insists that the fee allowed by his company for the care of certain injuries and operations is a hard and fixed rule, which must be adhered to by the physician in all cases.

Another thing that influences the fee is regional practice. What applies to one locality or city may not be true of another. Even in our own State of Michigan, the fees charged in Detroit are generally higher than those charged in Grand Rapids or Flint and likewise those charged in Grand Rapids or Flint are probably different from those charged in some smaller city.

Physicians have been known to attend cases and render bills to insurance companies for non-compensable injuries not within the jurisdiction of the Compensation Act. Cases have been reported where physicians have insisted that hemorrhoids resulted from sudden strain, that cases of ringworm and eczema were infections due to abrasions of the finger and that lumbago was due to accidental injury. There is no reason why insurance companies have not some criticism of physicians for handling such cases in this manner, and it is the duty of organized medicine to instruct its members so that repeated instances will become less frequent.

The majority of insurance companies feel that their greatest financial loss results from the unsatisfactory treatment of fractures. Improperly treated sprains, in reality incomplete or impacted fractures, where X-rays had not been previously taken in order to establish positive diagnoses, are the cause of much complaint. Insurance companies suggest that whenever sprains are diagnosed, they prefer that X-rays be taken in order to make an exact diagnosis and thereby explain the resulting prolonged disability. Such inefficiency on the part of physicians has resulted in the appointment of surgeons by insurance companies to represent them in the larger industrial centers. Likewise large corporations have selected some recognized and qualified surgeon to care for their industrial cases. Experience shows that the expense of caring for accident cases is reduced, the disability is lessened and there is more assurance of careful, conscientious handling of the case.

There is nothing that reacts quite as unfavorably upon the organized profession as

the tendency of some physicians to charge exorbitant fees to insurance companies for certain specific operations requiring only ordinary surgical skill, such as a hernia, reduction of a simple Colles' fracture or the suturing of a lacerated wound.

It does seem that we have practiced our profession long enough to make an estimate of the approximate number of dressings, the care and attendance needed in most cases of specific injuries and to be able to set a definite fee for such cases. I should like to see a committee appointed from this Association of Industrial Physicians and Surgeons, authorized to study this problem throughout the coming year and present at the next meeting a proposed fee schedule, and if it is accepted to endeavor to secure its adoption by the Industrial Accident Board. It should be based upon the experience of the insurance companies which are now authorized to transact business in Michigan and also the physicians engaged in industrial practice, and receive the endorsement of the State Medical Society.

CONTRACT PRACTICE

Closely associated with fee schedules is contract practice. It is a broad subject and at present there is nothing specific upon which limitations may be placed. It varies in its extent and policies in different regions. The American Medical Association appointed a committee of the Judicial Council some three years ago to study the question and about as far as they succeeded was to arrive at a definition, which is as follows:

"By the term 'contract practice,' as applied to medicine, is meant the carrying out of an agreement between a physician or group of physicians as principals or agents, and a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita."

It must be conceded that such practice, to a certain extent, must of necessity be tolerated. Large corporations, railroads and industrial plants have their regularly appointed salaried surgeons and staffs and they are rightfully entitled to them. We, as physicians, must overlook some of our former ideas regarding the ethics involved in this question. However, contract practice should be engaged in on a basis equivalent to the service rendered. Inasmuch as it is recognized by the American Medical Association and is being indulged in by the large plants, it would seem that it is best to permit it to

be controlled by the accepted practice in the various regions.

FACTORY CLINICS

Soon after the adoption of the Compensation Law, there was a tendency of employers to reduce the amount of time lost by injured employees going to and from physicians' offices for treatment. Factories provided clinics or first-aid stations in charge of either full time physicians or first-aid nurses or attendants, so that at present nearly every factory of size has its clinic, dispensary or first-aid department supervised by either a physician, nurse or an employee especially assigned to this work.

The services extended to employees in these clinics usually range from dressings of simple injuries to small member amputations, as the facilities and equipment will permit. Serious injuries are generally sent to a hospital. When treatment for industrial injuries is rendered by a nurse in a factory clinic, a physician should attend the case as soon thereafter as is possible and, in any event, should take full responsibility. No nurse has the right to render treatment under any other circumstances without violating the Medical Practice Act, and yet repeated violations are constantly occurring. In many instances, no effort is made to conceal the fact that nurses and first-aid men are treating industrial injuries. In others, attempts are made to camouflage by stating that physicians are in charge of the first-aid departments. I believe that I am safe in saying that the physicians themselves are somewhat to blame for this practice.

For some time it has been reported to the Civic and Industrial Relations Committee of the State Medical Society that nurses in charge of clinics and dispensaries in industrial plants have violated the Medical Practice Act by rendering medical services to injured and sick employees in cases where a physician should have been in attendance. A study was made of this question this year and questionnaires were mailed to the 54 county medical societies and all but 8 replied. These questionnaires requested the following information:

1. Number of factories in county having first-aid departments.
2. Number of first-aid departments having a physician in charge.
3. Number of first-aid departments having nurses in charge without physicians.

4. Extent of service rendered by physician—part or full time.

5. Extent of service rendered by nurse.

6. Does service extend to families of employees?

7. Does service cover medical as well as surgical attendance?

8. Summary of discussion and recommendations of county societies.

The most valuable report was based upon 318 questionnaires mailed to industrial plants in Detroit and Wayne County by the Wayne County Medical Society.

The results of this study gave to the committee the information that there was considerable definite evidence of violation of the Medical Practice Act by nurses in charge of clinics and first-aid departments. They even went so far as to render medical services to employees for other than simple ailments. First-aid men have been known to lance boils, remove slivers, even do finger amputations and suture wounds, without any knowledge or practice of asepsis. Numerous specific instances have been reported, some of which have been investigated and found to be true.

There is a growing tendency to extend the services of the factory clinics to the employees for the treatment of minor medical ailments, such as sore throat, headache, backache and mild influenza, without regard as to whether or not the employee is able to pay for the services of his own family physician. Services are even extended to the families of employees. This practice doubtless originated because employers have learned from experience that a well employee serves better than one laboring with a mild illness, which of course reduces his efficiency. The tender of such medical treatment is not primarily to give the employee something for nothing, and if it increases the efficiency of workmanship perhaps should not receive too great a criticism from the medical profession. To extend this service into the homes of other than employees requiring charity and to treat members of the family when they are ill, to the exclusion of the family physician, is a practice to be condemned.

Perhaps one of the most important questions present in the policy of industrial clinics is its close semblance to state medicine and the tendency to involve physicians in contract practice at a salary inadequate to care for the number of employees treated

or the type of service required. Physicians themselves are doubtless to blame for the conduct of factory clinics and it is earnestly requested that great care be exercised in not permitting the service to become that of state medicine nor to hire out to a factory by a spurious contract, unfair to either the employee or physician.

It seems that one method, and perhaps the best, would be to enlist the aid of the insurance companies, who, of course, are greatly affected from an economic standpoint by such incompetent practice, and to work with them in securing the enforcement of laws regulating violations of the Medical Practice Act. However, we must depend largely upon the report of specific violations and it is extremely difficult to keep abreast of the situation as there is no present provision for routine inspection of industrial clinics. It would therefore seem logical to make use of the information collected by the Bureau of Industrial Hygiene of the State Department of Health. This department makes inspections of the health service conducted in factories. Furthermore, if industrial clinics were licensed by the state, it would greatly improve matters by elevating the standards and policies of such clinics.

The State Board of Registration in Medicine has had numerous complaints made to them of the violation of the Medical Practice Act, a large number of which have originated in industrial clinics. This practice is growing, gaining headway each day and to me constitutes one of the greatest evils of medicine. It might properly be termed "the bolshevism of medicine." Factory clinics in which violations of the Medical Practice Act occur daily are being maintained, nurses and first-aid men are ignoring the laws and they are being encouraged by the employers, much to the detriment of the employee, the encroachment upon the physicians' field and the financial loss of the insurance company. Now is the time to regulate this practice and I believe that the only way to accomplish it is by state supervision of industrial hygiene, administered by regular inspection of factory clinics and standardization of the policies under which they are allowed to operate.

HOSPITAL CLINICS

Recently in some of the large eastern cities a form of practice has become evi-

dent in which hospitals have established clinics for the treatment and care of industrial injuries solicited by them from the factories. Staff surgeons render the care as a service on their month of assignment and the hospital collects the fees for its own services and also that of the physician. All the physician derives is experience in the care of such cases. Some of these hospitals put the funds received from this type of practice into a common account, the hospital taking $33\frac{1}{3}$ per cent, and $66\frac{2}{3}$ per cent being divided among the surgeons on the service. In other hospitals, resident surgeons are hired at a salary to care for industrial cases and the hospital retains all fees paid. This is unfair to the attending staff surgeons and profession at large. Attending surgeons for the month should care for the industrial cases and receive the fees.

This type of practice is extending to other localities and it is hoped that the organized profession and hospital staffs will deal with it as effectively as possible. It is practice of medicine by hospitals and constitutes absolute unfairness to the members of the medical profession and is a step further in the direction of state medicine.

ARBITRATION BOARDS

Arbitration board records show that there is a constantly increasing number of hearings, involving tedious work, necessitating an increase in the number of deputy commissioners and adding to the burdens of taxation. Physicians are required to attend these hearings, testifying before the Board, and usually are inadequately paid for the length of time required to render testimony. Attorneys for the plaintiff and defendant are usually engaged for the case. Witnesses are taken from their work and receive no pay. The commissioner hearing the case is almost always a layman and knows little about medicine and surgery or of medical terms and conditions except as he has gained them through the experience of conducting former hearings. He is many times not qualified to be a competent judge in deciding some vital medical question. Unscrupulous attorneys have made large cases out of simple injuries, costing insurance companies vast sums unnecessarily. The need for increased numbers of deputies to hear these cases has been created, making additional expense to the public. Many times the whole case depends upon some

simple medical question which could have been settled had the testifying physician made an unprejudiced, complete statement of facts.

It has always occurred to me that there should be, in each county, an appointed licensed physician to sit with the Board at the time when it met in that particular county, and act as referee for the deputy whenever some medical question would arise involving the necessity of an expert opinion. I have seen it repeatedly occur where one physician would testify that the disability indicated following a fractured tibia, for instance, was six months, and another physician would testify that in his judgment the time should have been eighteen months. Such a diversity of time is entirely unfair and if the case were examined by an unprejudiced physician, or at least the deputy be advised, the result would be a more favorable settlement. Again, in cases of malingering and hernia, statements of the employee may be made in such a manner as to indicate that he had been grossly mistreated. I should like to see some sort of legislation instigated during the coming year to provide that a medical referee be appointed in each county to serve on the Arbitration Board.

UNIFORMITY OF RECORD FORMS

There has been a great deal of controversy about standardization of record forms. Of course, every insurance company has a form which it uses exclusively. Some of these are simple and some are more complex, requiring considerable time to fill out. In taking this matter up with various insurance companies, most of them are willing to coöperate in the adoption of a standard form for report of industrial injuries. However, the argument is made that these forms are dependent upon the extent of territory in which the company transacts business. For instance, the form used in one state must conform to the laws of that particular state, while those in another must be changed to meet their requirements. Insurance companies endeavor to secure a form that will fit the needs required of it in the various states in which they do business. Naturally, the change must fit their individual requirements.

I believe that some adopted form of record should be proposed to the insurance companies and at least an endeavor made to secure its adoption by them.

HODGKIN'S DISEASE: WITH SPECIAL REFERENCE TO DIAGNOSTIC DIFFICULTIES, AND RESULTS FOLLOWING ROENTGEN IRRADIATION

REPORT OF A CASE

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Hodgkin's disease is one of those diseases that must constantly be kept in mind when one encounters an individual in early life who is suffering from an obscure illness. In other words, the individual will be one who is obviously ill and who shows the well marked signs of general poor health, fever and loss of weight, but the physical examination, although carefully done, reveals nothing that would indicate the underlying cause. The hospital chart indicates that the individual has fever, of no constant type and the pulse rate correspondingly elevated. The laboratory examinations even when very exhaustive, reveal little that is diagnostic. The chief finding so far as the laboratory is concerned will be, possibly, an anemia of vary-

ing degree, a low color index and the white cells may show a diminution in number or a moderate increase. Keen observers familiar with abnormal blood cells may detect something suggestive in the blood smear. The endotheliocyte or large mononuclear cells of normal blood are often increased in number.

The spleen in many long continued fevers

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is often palpable, and in Hodgkin's disease it often is found to be enlarged, but in many cases for months at the onset the spleen cannot be felt. Two other findings have been pointed out as being frequently present and although not diagnostic in the absence of glandular enlargement are very suggestive. These are, a generalized pruritus which may be very disturbing, and, second, a pigmentation of the trunk and lower extremities. This may be only a moderate tan, but often goes on to a deep mahogany. These two features were observed in the case described below and are present in an adolescent boy now under observation. This young man presents most of the findings enumerated above. A daily fever of 100-103, for a period of three months, with the consequent marked impairment of the general health. He has been observed by the medical staff of the University Hospital, for a period of about two months, with the result that a definite diagnosis cannot be established. This case is mentioned in order to point out the diagnostic difficulties that attend some of these cases.

Since Hodgkin's original description in 1832, the disease has been found to be widely distributed over Europe and America, and although it occurs most frequently in the second and third decade, the disease has been seen at the age of 80. In the more usual cases a painless enlargement of the cervical lymph nodes occurs and later the constitutional symptoms make their appearance. However, the type that presents much greater difficulty is the so-called larval or latent form where the superficial nodes may escape completely and the disease be confined entirely to the thoracic or abdominal lymph nodes, at least for many months at the onset. It is to this type particularly that I wish to draw attention as presenting diagnostic difficulties. The possibilities may suggest tuberculosis, typhoid fever, Malta fever, tularemia or syphilis. Most of the above can be ruled out by careful clinical and laboratory examination. Having done so, the possibility of Hodgkin's disease always presents itself and in such cases biopsy of a lymph node will usually clarify the situation, if a suitable gland is found. At times no enlarged gland can be found even when careful search is carried out. In such cases one can merely hazard an opinion as to the etiology of the condition and patient-

ly wait for further evidence to present itself.

CASE REPORT

The patient was a female, age 17 years, single, High School student. The patient first came under my observation during the last of January, 1929. She complained of weakness, loss of weight and fever. For a period of at least two years, patient had not been well, and during that time had merely noticed that she was weaker, was losing some weight and had fever. At times she would have some abdominal distress, described as fleeting crampy pains, associated with vomiting, on one or two occasions. During the summer of 1928, patient was examined by a physician while on a trip to the Eastern states, and the only finding of importance at that time was anemia, the exact degree being unknown. For three months previous to the date of my examination her temperature had been recorded and varied from 99 degrees to 104 degrees, with a corresponding elevation of the pulse rate. She had lost twenty-five pounds since October, 1928, and her relatives noticed that she had become very pale. During the last two months she experienced fever and drenching sweats without chills. Other than the abdominal pains she had no local symptoms.

Examination.—Patient was obviously ill and showed very definite evidence of loss of weight. She seemed quite comfortable and without any apparent distress. There was a very definite pallor of the lips and nail beds. The skin was dry and was definitely pigmented. Examination of head revealed no abnormality. Pupils were equal and reacted to light. There was nothing remarkable about the nose and throat. Examination of the superficial glands revealed no enlargement except a very small nodule about the size of a large bean above the left clavicle. The heart and lungs were within normal limits. The abdominal wall was below the costal margin. There was no tenderness, and the spleen could not be made out, although the examination was very satisfactory. The liver was not enlarged. The extremities were negative. The patient was a virgin and pelvic examination was not made. Neurological examination revealed no abnormality.

Laboratory Examination.—X-ray examination of the chest was considered to be well within normal limits. The mediastinal shadow was not enlarged and the lung fields were clear. Examination of the urine revealed no abnormality. The blood Kahn was negative. Blood cultures were negative. Malta fever agglutination test, negative. Blood studies as follows: Hgb. 48%; R. B. C. 3.1; W. B. C. 15,000; polymorphonuclear leukocytes 83%; lymphocytes 15%; eosinophiles 1%; basophiles 1%.

Biopsy of Gland.—The small gland above the left clavicle was the only palpable superficial lymph-node. This was excised and the specimen was examined by Dr. A. S. Warthin. This was reported as follows: "Material from ——— shows advanced Hodgkin's disease."

Treatment.—The first treatment extended from February 12th to 19th, and was given over the left cervical region, the right axilla, the right submaxillary region and over the entire abdomen. A dose of 90 degrees S.U.D. was given by using deep X-ray therapy. During the week following February 19th, patient felt much worse, the fever was higher, there was considerable malaise, and the cervical glands became much enlarged. However, at the end of about two weeks time she felt greatly improved. The fever more or less subsided; the appetite was much better, and she felt more encouraged. On March 27th, patient again entered the hospital and

stayed until the 29th. At that time the treatment was given only over the region of the enlarged lymph nodes of the neck. Subsequent to this treatment the patient again felt much improved for a short period of time. On May 10th and 11th the patient was treated over the abdomen. Following this treatment there was no evidence of improvement, and during the first part of June complained of much abdominal distress, nausea and vomiting and abdominal pains. On June 26th and 27th the same dosage as before was given to the abdomen. Immediately following this treatment there was paresis of both legs and in a few days time there was complete paralysis of both legs with loss of sphincter control. The paralysis was permanent during the following six months that she lived.

Subsequent Course of Illness.—Following the first X-ray therapy the superficial and deep cervical lymph-nodes became greatly enlarged, but subsequently during the next few weeks receded until they were barely palpable. However, within a month the glands on the left side of the neck were the size of an egg. The spleen was not palpable until about four months before death. Following the paralysis of both legs the general condition became much worse with a high daily fever and more or less complete loss of appetite. However, in spite of this, remissions occurred and life was prolonged for another six months. During September, for the first time the mediastinal glands began to enlarge, and gradually the left chest became a solid mass. The spleen was enlarged about a hand's breadth. During the last two months there was a lymphatic obstruction of the left side of the face and the left arm. The skin gradually assumed a deep mahogany brown over the abdomen, thorax and lower extremities. There was at no time difficulty in swallowing. No evidence of venous obstruction, and only moderate difficulty in breathing. Paresthesia of a distressing type was experienced over the abdomen, so that the patient could not bear to have the hand placed anywhere on the abdominal wall. She did not develop ascites. She developed an automatic bladder so that very little difficulty was experienced in that regard. The temperature chart showed a daily range of fever from 101 to 104 during the last six months. Drenching sweats were frequent. Cachexia was extreme during the last three months.

COMMENT

Hodgkin's disease may have a very insidious onset. Years may elapse after the onset of symptoms before the superficial lymph nodes become involved, and during that time the symptoms, fever, loss of weight, loss of strength, anemia, pigmentation of the skin and pruritus may become very marked. In such a case the diagnosis cannot be established with certainty. Primary involvement of the mediastinal lymph nodes has been very infrequent in my experience.

Inasmuch as X-ray therapy is the only form of treatment that is universally agreed upon as being of benefit to the patient, the tendency is to refer the case at once to a competent roentgen therapist. However, it would seem that there are certain cases of Hodgkin's disease or lymphogranulomat-

osis, or at least certain periods in the illness of these people, when they must be treated very carefully. Kruchen¹ after studying the results of roentgen therapy in 27 patients establishes the following rules. The first class comprises those patients presenting a chronic course. Examination of gland tissue shows a hyperplastic granular tissue, not very typical; the leukocytic count normal or slightly increased with lymphocytosis. This class of patient should have the diseased glands energetically radiated, and also the neighboring glands, as they are usually affected. The second class he calls the reactive or florid stage. Here the histologic examination reveals typical lymphogranulomatous tissue. The blood picture presents hyperleukocytosis with a varying lymphocytic count. Here he feels the irradiation is more difficult in cases with a more or less acute course. He applied 30-70 per cent of the H. E. D. to the surface and the doses given at intervals of 2-5 days. Temperature and blood picture guided his further treatments. During the third stage, with exhaustion and cachexia, where histologic examination shows formation of scars, and connective tissue, hyalinization, malignant growth and necrosis, and the blood picture shows a normal or slightly increased leukocytic count, therapy must be carried out with the greatest precaution. Large isolated tumors which, contrary to the neighboring glands, are not reduced by the irradiations, may disintegrate and cause a general severe toxic effect.

Bearing in mind the possibility that misguided enthusiasm may do our patient much harm, it would seem wise to consider the problem of prevention of exacerbations and injuries through the roentgen irradiation. When metastasis to the spine has occurred, the possibility of a marked local reaction following irradiation should always be considered. In the present case immediate paralysis of both legs followed irradiation over the abdomen. This is of such a serious nature that it would seem wise to X-ray the spinal column before treating retroperitoneal lymph-nodes. In those cases running a more or less severe course, the systemic effect following irradiation, may be very harmful and when doubt exists it would seem wise to try out the effect of partial or test dose. Kruchen² has made a serious effort to analyze some of the factors con-

cerned in the exacerbations and accidents following irradiation of lymphogranulomatosis.

CONCLUSIONS

1. In the absence of enlarged superficial lymph nodes the diagnosis of Hodgkin's disease is very difficult.

2. Hodgkin's disease may be present for a period of more than one year before superficial nodes are palpable, and before X-ray examination of the mediastinum reveals any abnormality.

3. In a patient ill with obscure fever, where all other usual causes have been eliminated, pigmentation of the trunk and pruritus are very suggestive of Hodgkin's disease.

4. Roentgen irradiation should be very carefully considered when the clinical course is more or less acute.

5. In the absence of large masses of glands, in a very ill patient it is doubtful if much benefit will be derived from roentgen irradiation.

6. Metastasis to bone does not react in the same manner to irradiation as do enlarged lymph nodes.

7. Metastasis to the spine should be searched for before subjecting the patient to irradiation over the abdomen.

8. It would seem probable that the most startling improvements result in those cases who run a chronic course, without great systemic reaction.

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MASTOIDITIS FOLLOWING SKULL FRACTURE*

WITH REPORT OF A CASE

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and

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Mastoiditis is an uncommon complication of skull fracture. We were able to find twenty-two reports of this condition, arranged chronologically as follows: Burnett,¹ 1882; Szenes,¹ 1898; Burnett,¹ 1899; Hang,¹ 1902; Oppenheimer,¹ 1906; Oertel,¹ 1908; Black,² 1914; Imperatori,¹ 1915; Deuch,¹ 1917; Carter,³ 1917; Smith,⁴ two cases, 1919; Friedman and Greenfield,⁵ 1921; Malan,¹ 1922; Heller and Simon,⁶ two cases, 1927; Horn,⁶ 1927; Harrison,⁷ 1928; McCaskey,⁸ four cases, 1929.

Mastoiditis may be said to be a delayed complication of skull fracture, the clinical picture developing three to six weeks after the initial injury. The majority of fractures of the base of the skull involve the middle fossa. Davis⁹ shows that the tympanic membrane and mastoid antrum are in the line of such a fracture. The initial mortality of fractures of the base of the skull is about 40 per cent, hence many of these patients die before they can develop mastoiditis. In the reported cases one is impressed with the absence of marked reaction to the injury;

one of the cases reported by Heller and Simon continued his occupation and did not consult a physician until four weeks after the accident.

The infection enters through the ruptured tympanum or through the Eustachian tube. It is possible for trauma, even without fracture, to light up a quiescent former infection, as in the case reported by Kopetzky.¹⁰ Kahn¹¹ suggests that injury may lower the resistance, allowing systemic infection to become localized.

The clinical and X-ray findings are the same as those of mastoiditis as usually seen. The treatment is surgical. In opening the mastoid process the hammer and chisel should be used with extreme caution or not at all. Mastoiditis following fracture of the

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skull can have all the complications of any mastoiditis, such as erysipelas, perisinus, abscess, lateral sinus thrombosis, meningitis or brain abscess.

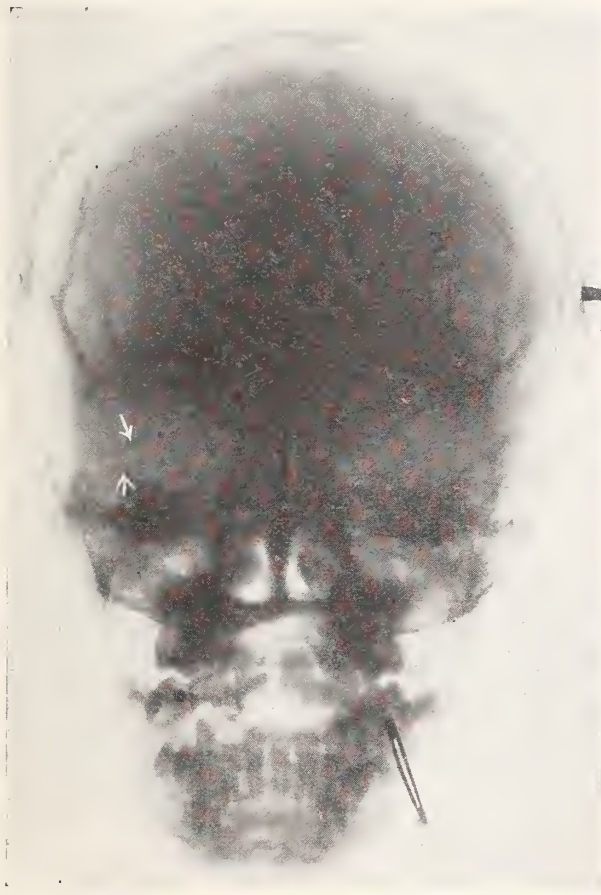


Fig. 1. The arrows show a fracture which extends through the mastoid portion of the right temporal bone. The light line running diagonally upward shows the course of the fracture.

CASE REPORT

Hospital No. 74016. O. S. Male, white, 8 years old. The patient entered the hospital July 10, 1930, complaining of injury to the head.

Past History: Measles, bronchitis, pertussis, fractured clavicle. No history of ear trouble.

Present Illness: July 10, 1930, the patient was riding in his father's truck, which was moving about five miles an hour, when the door opened suddenly, precipitating the patient onto the street. He fell on the pavement, striking his head behind the right ear. When he was picked up it was noticed that there was bleeding from the right ear. On the way to the hospital he vomited two or three times, the vomitus containing blood. At no time did he lose consciousness.

Physical examination showed a well developed and nourished lad, lying quietly in bed, not complaining of pain. He was conscious.

Eyes: Pupils reacted to light and accommodation.

Ears: There was a swollen, ecchymosed, tender area over the right mastoid process. There was a bloody discharge from both ears, more profuse on the right side.

Throat: Tonsils were infected. Blood clots were noticed on the pharyngeal wall.

Thorax: There was a bruised area over the right scapula. The heart and lungs showed no demonstrable pathology.

Abdomen and extremities routinely negative. Temperature, pulse and respirations were not remarkable.

X-ray of the skull taken July 10 showed "fracture without depression of the fragments, involving the



Fig. 2. The left mastoid with normal well aerated mastoid cells.

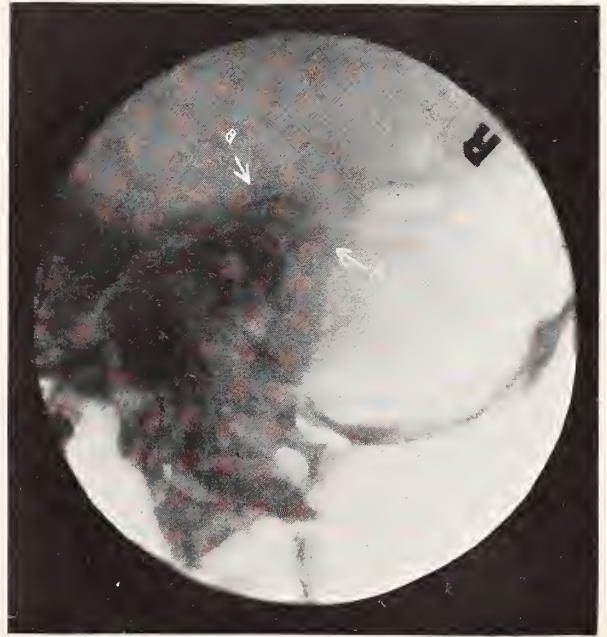


Fig. 3. The involvement of the right mastoid which followed three weeks after the injury that resulted in fracture.

right occipital bone posterior to the mastoid; the fracture line extending upward and posteriorly, crossing the suture line. We think that one line of the fracture also involves the temporal bone."

Clinical Course: The patient was kept in bed, given magnesium sulphate by mouth, soft diet and ice cap. Fluids were limited. His temperature, pulse and respirations were never excessively altered. He vomited three or four times during the first two days of his hospital stay. The ears improved until the left ear was dry and the right had only a slight sanguinous discharge. The swelling and tenderness

over the right mastoid disappeared. July 20, ten days after admission, the patient was permitted to go home. He was instructed to stay in bed three weeks and then return to the Out-patient Department for observation.

Second Admission: The patient was readmitted to the hospital August 2, complaining of severe pain in the right ear.

Interval History: About July 26 the discharge from the right ear had become purulent and more profuse. July 30, the patient had severe pain in the ear preventing sleep. A swelling appeared over the right mastoid and the patient was returned to the hospital.

Examination showed the right ear filled with a white creamy purulent discharge with a foul odor. There was a perforation in the inferior posterior portion of the drum. The right ear protruded from the side of the head. There was swelling and exquisite tenderness over the right mastoid process.

Temperature 100, pulse 98, respirations 20. White blood count taken August 4 showed 13,300 cells per cubic mm. There were 78 per cent polys in the blood smear.

X-ray of the mastoids August 4 was reported as showing a normal mastoid on the left side, while the right showed a haziness and indistinctness of all the mastoid structures, more marked around the antrum. The fracture line was observed in this plate.

Operation August 5, 1930. Complete right mastoidectomy.

When the periosteum was elevated the fracture line was easily identified, running from a point just above the lateral sinus forward across the mastoid to the middle of the ear canal. It was possible to make an opening through the outer table with a curette. This opening was enlarged with a rongeur until the whole mastoid cavity was exposed. The cells were full of pus. The entire mastoid was

exenterated, the wound packed with iodoform gauze and the upper margin closed with three sutures.

Culture taken from the mastoid at the time of operation failed to grow. Convalescence was uncomplicated. The wound closed rapidly. September 3 the boy's tonsils and adenoids were removed. He was discharged from the hospital September 11 and when last seen the mastoid was completely healed.

CONCLUSIONS

(1) A case is reported of mastoiditis following fracture of the skull. Operation and recovery.

(2) Twenty-two similar cases were found in the literature.

(3) When it does occur, mastoiditis is a delayed complication of skull fracture.

(4) It may show all the classical symptoms and signs of mastoiditis.

(5) It may have all the complications of mastoiditis.

(6) The treatment is surgical.
1706 Eaton Tower.

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HEPATIC AMEBIASIS

CASE HISTORY

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An Italian, age 33 years. Born in Italy, southern part, and resided in temperate climate for greater portion of his life. Three years ago patient noticed periodic attacks of weakness, loss of weight, afternoon temperature, anemia with an earthy color to his skin without icterus. He had an upper right costal pain radiating to the right scapula. He sought help from well known clinics and from men of reputation and was diagnosed pleurisy, tuberculosis, neurasthenia, appendicitis and cholecystitis, all conditions this disease is known to simulate closely.

Three years ago a drainage through the ninth costal space posterior with stab wound and tube drainage for a supposed pleural effusion. Auscultation at the right base reveals crepitant râles with extension upward of the liver dullness. The lower edge of the liver is palpable below the costal margin for 8 cm. with tenderness and muscular rigidity along the costal margin. Physical is otherwise normal and negative.

The right dome of the diaphragm is considerably higher than the left. The left dome has an excursion of about 1½ inches whereas the right has excursion of ½ inch. The right dome is about a vertebra and a half higher than the left. X-ray impression: Subphrenic or intrahepatic involvement.

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Laboratory Report: Hemoglobin 70%; R. B. C. 3,400,000; W. B. C. 9,500; Poly. 70; Large Mono. 12; Small Mono. 6; Transitional 2; Eosinophiles 2.

On the fifteenth day of June, 1929, the patient was operated under spinal anesthesia. A Kocher incision was made. Liver was found 8 cm. below costal margin. There were no adhesions to the diaphragm. On the dome of the liver a fluctuant mass of immense proportions was found. It was easily ruptured and a large quantity of serosanguinous purulent material gushed from wound. Gauze drainage allowed to remain seven days.

Patient's postoperative course was uneventful; he was discharged from the hospital on the thirty-fourth day comparatively well. After leaving the hospital one month, a small abscess developed in the suture

line which was opened and again started to drain. Drainage persisted for nine months, when pus localized in a second abscess, which was evacuated. Cultures were negative. Smears showed many actively motile *Endameba histolytica*. Repeated fresh stools were examined, no ameba or encysted forms were found. Patient was placed on $\frac{3}{4}$ of grain of emetine hydrochloride and two tablets of stovarsol daily. There was rapid subsidence of symptoms and drainage, with complete recovery.

The diagnosis of hepatic amebiasis is difficult only because of its rarity in this northern climate. Confusion with cholecystitis, appendicitis, pleurisy, neurasthenia and tuberculosis is likely. All of the above diagnoses were made of the patient's trouble. Pain is referred to the shoulder if the dome is affected, to the appendix if the concave surface is affected, and when the left lobe is affected it is referred to the gastric area.

Liver abscess was known at the time of Hippocrates, who is said to have cauterized such abscesses. The association of the abscess with ameba was suggested as far back as 1887. Geographically, amebic abscess is of course usually associated with warmer climates but the disease may be found in any climate. A short while ago the department of health at Chicago examined freshly prepared stools and a good number of those examined were found to be so infected.

The exciting cause of hepatic amebiasis is the *endameba histolytica*, whose destruction causes the gelatinous prune juice pus which my patient showed. On careful questioning dysentery was not a part of my patient's history but with following statistics you will note the number of abscess cases associated with dysentery.

500 cases of abscess (dysentery 60 per cent Kaetules).

444 cases of abscess (dysentery 59 per cent Zancarol).

500 cases of abscess (dysentery 85 per cent Kelsh Kerener).

63 cases of abscess (dysentery 90.5 per cent Rogers).

38 cases of abscess (dysentery 85 per cent Siam Hospital autopsies).

Amebic abscess is rare among children and ten times less common in women than in men. Bacillary dysentery differs from amebic dysentery in the severity of the intestinal symptoms but does not produce abscess.

It is a well known fact that liver abscess may set in years after the infection. There seems little doubt but that amebæ in the thrombosed terminals of the portal vein are carried by way of the upward current into the liver and lodge in the capillaries. The abscess is usually solitary but may be multiple. My patient has shown a somewhat typical course with an afternoon rise in temperature, night sweats, recurrences, a feeling of weight in liver and tenderness on palpation. There is no spleen enlargement which might differentiate it from some of the splenomegalies. Auscultation at the right base reveals crepitant râles; there is a dry cough temperature, anemia and emaciation which suggest tuberculosis. Insomnia is a marked symptom, earthy color of the skin without icterus.

Prognosis: The prognosis with aspiration and medical treatment is better than with open operation; open operation is indicated if the involvement is extreme. Emetine hydrochloride and stovarsol should be given before and after aspiration.

If an open operation is mandatory a right rectus or Kocher incision rather than by posterior route, better access is made to the liver and better drainage. The transpleural route may be necessary for large collection of pus that presents at the pleural or costophrenic angle.

Yatren, a new proprietary preparation, has been used with some success.

TREATMENT OF FRACTURED JAWS*

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Two outstanding fundamentals are necessary for good results in the reduction of fractured jaws, namely: (a) Normal or as nearly a normal occlusion as possible when teeth are present, which necessitates accurate approximation of the fragments. (b) Immobilization of the parts fractured. Since the dentist and oral surgeon, because of their basic training, are more familiar with the teeth and oral cavity than the physician, it has become a common practice in recent years for the physician to refer this work to them. The oral surgeon's knowledge of the occlusion of teeth probably makes it more apropos for them to reduce fractures of the superior and inferior maxillæ than for the average physician.

Fractured jaws occur more frequently between the ages of twenty and sixty years. During this period most people have some teeth, therefore it is best to consider first, fractures of the jaws with teeth present and secondly, fractures occurring in edentulous

jaws. It is a well known fact, founded on statistics at the University Hospital, Ann Arbor, Michigan, and also by the experience of the writer that there are a great many more inferior maxillæ fractures than superior maxillæ fractures. The ratio is about nine to one.

After an X-ray has been taken and the fracture or fractures are located, the patient's mouth should be examined to find if on oral prophylaxis is indicated. The advantage of this is to remove superficial calculus around the necks of the teeth, which

*Read before a meeting of the Noon Day Study Club of the Wayne County Medical Society April 11, 1930.

†Dr. Maitland graduated from the University of Michigan Dental Department 1922. He was associated with Dr. Chamber Lyons in the Department of Oral Surgery two years. He was connected at one time with the Department of Oral Surgery and Exodontia, University of Tennessee.

will enable the wires or splints to extend down to the cervical margin of the teeth. It will also help to prevent gingivitis and later pyorrhetic pockets. If any retained roots are present or a tooth found to be in the line of fracture, they should be removed, by all means, as they always have a tendency to retard the healing of the bone, if left in situ.

When a fracture is of a compound type, all the loose fragments should be removed and the area thoroughly cleansed. If any soft tissue is overlapping, the excess should be removed to avoid a possible infection. If all the teeth are present and the fracture is found in the ascending ramus or the angle of the jaw, it is advisable to extract the tooth the patient can best afford to lose for the reception of liquid nourishment. This is decided by examining the teeth individually. If the lower first molar (sixth year molar) is devitalized or filled, the extraction of this tooth is indicated. If the lower anterior teeth are pyorrhetic and loose and beyond retaining, it is better to sacrifice them than a sound tooth. Feeding a patient through the nose would be advisable if the patient could be treated in the hospital over the entire period in which the wires or splints are present in the patient's mouth. However, and since hospitalization for three weeks or more is unnecessary with a single fracture, we feel that feeding by the nasal route is contraindicated in practically every case.

It is needless to say that the patient finds time exceptionally long when it becomes necessary to wire the jaws together for a period of three to six weeks. His inability to partake and enjoy any solid food, and the difficulty in taking liquids cannot help but make him irritable. Splints allow the patient a great deal more freedom and are always indicated when immobilization can be accomplished without wiring the upper and lower jaws together.

The different forms of splints used are, Orthodontic, Gunning, Kingsley and numerous individual splints to fulfill the particular cases. The orthodontic splints used in straightening the teeth give very satisfactory results and may be used when the fracture shows no displacement but merely a break through the bone. If these splints can be used within a few hours after the fracture occurs, the fragments are still in apposition and the muscle strain cannot

cause any displacement. It is a well known fact that there are no fractures in the human body where the muscle strain plays a more important part in displacement of the fragments than in fractures of the inferior maxillæ.

Probably 90 per cent of the fractures where teeth are present can be reduced with copper-bronze wire (24 gauge). When using wire this way, it is called interdental ligation. The wires are placed between the necks of the teeth and are twisted on themselves. The wires from the upper teeth are criss-crossed to those on the lower teeth and the two twisted together. Without a doubt this method of treatment is the most satisfactory when the teeth are present, and in dealing with compound multiple fractures. It is always advisable to X-ray fragments to see that you have continuity of parts after the fracture is reduced.

If the fracture is at the angle of the jaw, posterior to the second molar region or wisdom tooth, it is exceptionally difficult to get the posterior fragment in correct apposition with the anterior fragment, due to the muscles of mastication. This condition however, should not cause alarm as the occlusion of the teeth can be made approximately normal and the patient will have a functional result.

EDENTULOUS FRACTURES

In fractures where teeth are totally missing it is necessary to use some form of prosthesis, as the best results are found to be with the aid of prosthetic retentions. If a patient has dentures they have been wearing previous to the time a fracture occurs, we can use them to act as a splint, wiring the upper and lower denture together, removing the lower anterior teeth of the denture to allow the patient to take nourishment. A Barton bandage can be placed under the chin to help facilitate immobility of the fragments. In cases where patients do not possess dentures, a vulcanite Gunning splint is made. This is done by taking a wax impression of both jaws, after which a model is made of vulcanite. A hole is placed in the center of the splint to allow the patient to draw liquids through a glass tube.

We find it very necessary to reduce fractures by an open reduction. We be-

lieve it is indicated only as a last resort. Our main reason for the above statement is due to pressure necrosis, which invariably follows when wires or bone screws are placed in direct contact with the bone. When employing this type of treatment, osteomyelitis develops in the majority of cases, in spite of the fact aseptic technic is practiced. With infection present immobility cannot be maintained because of the activity of osteoclasts around the wire.

The choice of anesthesia depends largely upon the individual case. Local anesthesia is preferred by most men whenever possible, to eliminate any dangers of general anesthesia. It also eliminates the possibility of the patient vomiting following operation, which is of great importance when a fracture

is reduced by interdental ligation. The co-operation the patient can give with local anesthesia is desirable in establishing natural occlusion.

Complications—

Local—

Infection,
Loss of tooth vitality,
Alveolar abscess,
Secondary hemorrhage,
Laceration or severing of sensitive nerve trunk, leading to anesthesia,
Trismus.

General—

Fat embolism,
Stiffness of Temporomandibular joint,
Ankylosis.

TULAREMIA IN MICHIGAN*

REPORT OF A CASE

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Tularemia is not any more considered a rare disease. As many as 800 cases have been reported during the past five years from forty states in the Union. Michigan, however, has a record of only five cases reported so far. It is conceivable that here and there a case might go unrecognized. It is believed, therefore, that cases of tularemia in Michigan should be brought to the attention of the profession, to assure greater familiarity with the disease in this part of the country.

This report embraces a clinical, bacteriological and pathological study of a case of tularemia. Pus from a suppurating epitrochlear gland was inoculated into a guinea pig with the result that the animal showed typical pathological features of tularemia, and the organisms isolated gave positive agglutination with the patient's serum. Before presenting the data, it might be well briefly to summarize the cases of tularemia reported in Michigan by other workers.

SUMMARY OF REPORTED CASES

To Doctors Edward L. Compere, Jr., and J. H. McMillin of Henry Ford Hospital of Detroit is due the honor of reporting the first two cases in Michigan. Patient one (male) was admitted five weeks after the onset of a febrile attack for which no apparent cause had been discovered. His complaints were high temperature, "aching pains" in the muscles and joints and general malaise. At the end of the first week of the

febrile attack there was noted a painful swelling in the right axilla. One of two physicians called it pneumonia and the other typhoid fever but further study was not done. The patient lost ten pounds weight in the first three weeks of his illness. Further questioning revealed that the patient had cleaned rabbits a few days prior to the onset of the febrile attack, though there was no history of a primary lesion. This may be classed as a glandular tularemia. Agglutination in this case was reported 1-1280 by the hygienic laboratories at Washington.

Patient two (female) was admitted complaining of lumps in the axilla and "feeling tired all the time." The history revealed an acute illness five weeks previously with chills and fever which immediately followed a small vesicle on the middle finger of the right hand. She admitted having cleaned rabbits on several occasions prior to her present illness. Agglutinations in this case

*From the Department of Surgery, University of Michigan.

were 1-320. This case may be classed as an ulceroglandular tularemia.

The third case was reported by Dr. Glenn L. Coan of Wyandotte, Michigan. This occurred in a woman, aged 22, who gave a history of chills, fever and exhaustion beginning three months previously while she was a resident of Tennessee. There was no history of a primary lesion or the handling of rabbits. Her home physician thought it was typhoid fever and gave her one injection of typhoid vaccine. She had lived in Michigan about a month before she consulted Dr. Coan. At that time she was having daily chills and a progressive weakness. The family suspected "consumption." The menses had been suppressed since the onset of the present illness, but examination ruled out the probability of pregnancy. The positive physical findings were slight conjunctival injection and a systolic apical murmur. For about a week after consultation she had a papular rash over the arms and trunk. The temperature ranged from 102 to 104 degrees with the usual morning remissions. Blood study revealed no *Plasmodium malariae*. The Von Pirquet and Wassermann were negative but the Widal was positive. Blood culture was negative. A single injection of neoarsphenamine was without appreciable effect, as was a course of quinine. A blood specimen sent to the U. S. P. H. S. at Washington reported positive agglutination for *B. tularensis*, and negative for undulant fever. This is the typhoidal type of tularemia.

Dr. Arthur M. Shaeffer of Jackson, Michigan, reported the next case early in 1929. The patient (male) worked at the West Market in Detroit and gave a history of cutting the top of the right thumb, which was followed in three days by headache, chills and fever of 102 degrees. A painful mass soon followed in the axilla. On admission, the epitrochlear and axillary glands were swollen and tender. The veins of the forearm and arm were accompanied by red streaks and induration. Agglutination in this case was 1-640. This was the ulceroglandular type of tularemia. It is of interest to note that pus aspirated from the fluctuant axillary gland did not show organisms on direct examination but a guinea pig inoculated with the material died in four days.

This summary includes all reported cases of tularemia in Michigan to the present ar-

ticle. Through the department of vital statistics and epidemiology at Lansing, another case was reported as occurring in Detroit. Also through Dr. Walter Simpson of Dayton, Ohio, to whom much credit is due in stimulating studies on and the detection of tularemia, it was learned that Dr. Stuart Wilson of Detroit had sent him blood from a suspected case, which Dr. Simpson reported as positive for tularemia. Further details of these two cases were not ascertainable.

REPORT OF A CASE

Wm. P., a barber, age 39, on 11-24-29 while cleaning rabbits sent him from southern Illinois, received a slight abrasion on the knuckle of the left ring finger by a sharp end of a bone. The cut was sufficient to cause slight bleeding, which discontinued on washing his hands and he paid no further attention to it. On Thanksgiving Day, or four days later, he felt chilly, slightly nauseated, with marked prostration. At this time he also noticed a reddish papule at the site of the scratch on the finger and a little soreness but no swelling in the region of the epitrochlear gland of the corresponding arm. He slept very little that night and remained home the next three days. Upon returning to work he felt better generally, but noticed considerable soreness in the left axilla on raising his arm. He consulted his local physician, who told him he had blood poisoning and advised soaks to the hand and poultices to the elbow. This treatment he continued for a week without much improvement. He consulted another physician, who advised continuation of the soaks, and on the following day, 12-10-29, or the 16th day after cleaning rabbits, he came to the University Hospital. He had lost eight pounds of weight with the present illness. The past history was entirely irrelevant.

Physical examination revealed a thin adult male of the stated age, capable of walking into the clinic but rather pale and appearing sick. Special examination of the left hand and arm revealed an ulcer on the dorsum of the proximal interphalangeal joint of the ring finger. It was a round, punched-out ulcer about 3 mm. in diameter and presented a rolled whitish edge about 5 mm. above the level of the skin. Surrounding this was a bright red aureola about 1 cm. in width. The depth of the ulcer was about 1 mm. The base was covered by a scanty sero-purulent discharge which, when cleaned away, disclosed a rather smooth reddish granulation tissue. In the region of the epitrochlear gland was a swelling elliptical in outline measuring 4 by 6 cm. The overlying skin was moderately erythematous. The swelling was hard and very tender. In the axilla two small chestnut-sized nodules were palpable and found moderately tender. The liver and spleen were not palpable though there was suggestive tenderness under the costal margin in the splenic region. The remainder of the physical examination was essentially negative.

The patient having given a history of handling rabbits, tularemia was immediately suspected and blood for an agglutination test was taken. He was admitted to the hospital with a temperature of 99.5, pulse 75, respirations 10. The white blood cell count was 12,000 and the hemoglobin was 83%. The urine as well as the Kahn reactions were negative. The

patient was strictly confined to bed and continuous massive hot boric dressings were applied to include the entire hand, arm and axilla. The temperature ranged from 99 degrees at 8 o'clock in the mornings to 101 degrees at 4 o'clock in the afternoons for the next three days, when fluctuation at the epitrochlear region was first noticed. The abscess was incised and about an ounce of thick grayish pus was evacuated. In the inferior aspect of the incision was felt a hard hazel-nut size nodule which was excised for pathological study. This nodule was reddish brown in color, rather firm but could be distinguished as a lymph gland. During this time the primary lesion on the finger was subsiding and not at all sore, but for the first time a blotchy erythematous papular rash was noticed over the dorsum of both hands and wrists. It was as well marked on the right hand as on the left. The rash was entirely symptomless and disappeared in about a week without special treatment. Immediately following the evacuation of the abscess, the temperature fell to approximately normal, ranging between 98 degrees in the mornings and 99.5 degrees in the afternoons. The patient ate and felt better generally. The swelling and soreness in the axilla persisted for two weeks without fluctuation and gradually subsided. There was no special treatment outside of keeping the fluid intake between 5-6000 c.c. daily and free catharsis. Convalescence was prolonged chiefly because of weakness and partially because of the rather sluggish healing of the incision of the epitrochlear abscess. At the time of discharge, the white blood cell count had fallen to 9,800 and the hemoglobin had risen to 95%.

PATHOLOGICAL REPORT

The pathological report was as follows: "Grossly, this specimen is a lymph node measuring 3 cm. in length and 2 in transverse diameter. Microscopically, it shows a marked inflammatory hyperplasia characterized by multiple foci of necrosis. Each of these shows in varying degree a polymorphonuclear infiltration in the necrotic center with a zone of epithelioid proliferation about it. Throughout the remainder of the node, there are scattered small epithelioid nodules, some with multinucleate giant cells and many showing scattered polynuclears. This lymph node presents, therefore, the typical lesions of tularemia."

BACTERIOLOGICAL REPORT

On 12-10-29, sixteenth day of disease, agglutination tests made with bacterial antigen 38* were negative.

On 12-12-29, eighteenth day of disease, a blood culture was taken and cultured in cystine blood broth. This was incubated for three weeks but no growth appeared.

On 12-17-29, a second blood was taken for agglutination and was found to be positive in a dilution of 1:80.

On 12-15-29, the twenty-first day of the disease, the epitrochlear abscess was incised and the pus obtained used for culture and for guinea pig inoculations. After some difficulty, one colony of *B. tularensis* was isolated from the pus by direct plate method, using cystine blood agar.

About 0.5 c.c. of pus was suspended in 5 c.c. saline. Of this suspension, 0.5 c.c. was inoculated into each of two guinea pigs; pig No. V570, intraperitoneally, and pig No. V571, intradermally.

Guinea pig V570 died on the fourth day after inoculation. Autopsy showed multiple necrosis in both the liver and the spleen. A severe peritonitis

was evident. Through the kindness of the pathological laboratory, sections were made of both liver and spleen. The pathological report is given below. Another section of each organ was ground up with mortar and pestle and a little sterile saline. This was then cultured on cystine blood agar plate and cystine blood broth. After three days incubation *B. tularensis* organism was isolated.

Guinea pig V571 was killed on the morning of the sixth day, at which time it was very ill and had a distinct conjunctivitis. Autopsy showed an abscess 3 to 5 mm. in diameter at the point of inoculation, the liver and spleen were extensively involved, as in the other pig, and the inguinal glands showed small abscesses. *B. tularensis* was isolated from each organ when gross evidence was observed. The strain isolated was called P40.

PATHOLOGICAL REPORT ON GUINEA PIGS

"This material includes livers, spleens and lymph nodes from two guinea pigs injected with pus from epitrochlear lymph node from the patient Wm. P. One was killed 3½ days and the other 5½ days after the injection. Microscopically, the spleens and liver show small grayish-white necrotic foci. Microscopically, the lymph nodes show nearly complete necrosis with polynuclear infiltration. The spleens and livers show scattered miliary necroses with early polynuclear infiltration. The changes are characteristic of tularemia in the guinea pig."

SEROLOGICAL TESTS

Bacterial antigens were prepared from No. 38 and P40. These were used to test the patient's serum and a known positive *B. tularensis* antiserum, which had been obtained from Dr. Simpson, for agglutinins. The following table gives the results obtained:

Antigen	Known tularemia antiserum	Patient's serum
No. 38		
P40	1:640	1:80
	1:320	1:80

It may be observed that the patient's serum did not reach a higher agglutination titer than 1:80 in 23 days. The titer of the patient's serum was not tested after 12-17-29.

POINTS IN DIAGNOSIS

First: History of a recent febrile attack with chills and malaise seemed to be the most consistent findings in the above cases. The possibilities for a differential diagnosis include malaria, typhoid fever, influenza, and undulant fever, more remotely mild endocarditis, septicemia and miliary tuberculosis. The convalescence in tularemia is characteristic in that it is markedly prolonged, even months to years because of an extreme weakness and ease of exhaustion.

Second: The second diagnostic principle is the history of a contact with rabbits, which is by far our most common animal host east of the Mississippi River. Such a history is by no means always obtainable, as in the case from Tennessee, but when present and especially when followed in three or four days by a primary sore or ulcer, is almost pathognomonic of tularemia.

*Culture No. 38 was an attenuated culture received from Francis of U. S. Hygienic Laboratory.

Third: The suspicion once having been aroused by the history, the diagnosis of tularemia remains to be proven or disproven by blood culture or serological study. Phys-



Fig. 1. Spleen of tularemia guinea pig showing miliary necrotic foci (the large whitish areas are connective tissue in the capsule).

ical examination may render supporting evidence, but it cannot be used as an important diagnostic factor. In only the typical ulceroglandular cases is it at all suggestive. The blood culture has been found by Francis from the third to sixth day of the disease and Simpson has isolated the organisms from the blood of the patient after transference through an animal host, as late as the twelfth day of the disease. The agglutination has never been found positive before the seventh day of the disease. Hence there is an early bacteremia and a slightly delayed agglutination property in the blood. The titer increases gradually and, according to Simpson, becomes a per-

manent property of the serum with permanent immunity. Guinea pig inoculation is helpful in bacteriological study. The macroscopic and microscopic study of the spleen and liver of these animals, as in the reported case, is very characteristic though can be easily mistaken for miliary tuberculosis. (See accompanying picture.)

SUMMARY

A case of tularemia is reported of the ulceroglandular type. *B. tularensis* was isolated from a suppurating gland. This organism produced typical lesions in guinea pigs and was agglutinated by the patient's serum. This case is the fifth reported in this state. The scarcity of tularemia in Michigan may be due to the state law prohibiting the sale of rabbits killed or trapped in this state or it may also be due, in part at least, to our lack of familiarity in detecting this disease. So far, none of the reported cases have come from the rabbits of Michigan but from those shipped in from other states, such as Missouri, Tennessee and Southern Illinois.

Appreciation is extended to Dr. R. L. Kahn, Director of Laboratories of the University Hospital, for the special bacteriological studies and for helpful suggestions.

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OBESITY WILL BE HEALTH PROBLEM OF FUTURE

Obesity, or overweight, will be the nutrition problem of the future, taking the place of malnutrition and rickets, Dr. Alonzo Engellbert Taylor of Leland Stanford University predicted at the celebration of medical progress held at the University of Pennsylvania Medical School. Instead of worry over how to feed the world, man's worry will soon be how to keep the world from being overfed. Scientific methods of farming have increased the crop production, and at the same time the use of machinery on the farm has decreased the number of animals to be fed, which in turn increases the world's food surplus. Likewise, the world population will soon become stationary, so there will be fewer people to feed.

At present physicians are still teaching people to eat enough to avoid malnutrition and lowered resistance to disease. All that will change and the physicians will soon need to teach people not to eat too much.—*Science Service*.

RELATION OF SPLEEN TO JAUNDICE

From a correlation of research facts taken from the literature up to the present date Robert Lee Payne, Norfolk, Va., concludes as follows: 1. A certain amount of red blood cell destruction takes place in the spleen. 2. A certain amount of bilirubin is formed in the spleen. 3. The amount of red blood cell destruction and bilirubin formation in the spleen is relatively small as compared with the consummation of these functions elsewhere in the body. 4. That hyperbilirubinemia associated with dysfunction of the spleen is dependent on not only the spleen but the entire hematopoietic system must be considered as an important contributing factor in evaluating the relation of the spleen to jaundice. Particularly must it be remembered that there is commonly associated a hepatitis in which failure of the liver cells to filter bile pigments represents an active rôle in the production of the jaundice.—*Journal A. M. A.*

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Commissioner
LANSING, MICHIGAN

NEW COUNTY HEALTH DEPARTMENTS

Three counties, Kent, Ottawa and Isabella, have been added to the list of counties having health departments as the result of action taken at the October session of the

boards of supervisors. The total of counties having health departments sponsored by boards of supervisors now stands at eight. The following table shows the counties and districts of Michigan having full-time health departments:

Name of County	How Unit is Financed	Health Officer
Genesee	County State Rockefeller Foundation U. S. Public Health Service	Leslie Lambert, M.D. Court House Flint
Isabella	County City State Rockefeller Foundation U. S. Public Health Service Children's Fund of Michigan	(To be appointed)
Kent	County State Rockefeller Foundation U. S. Public Health Service	(To be appointed)
Menominee	Children's Fund of Michigan	Merrill Champion, M.D. Menominee
Midland	County State Rockefeller Foundation	(To be appointed)
Oakland	County State Children's Fund of Michigan	John D. Monroe, M.D. Pontiac
Ottawa	County State Rockefeller Foundation U. S. Public Health Service	(To be appointed)
Saginaw	County State Rockefeller Foundation	Frank L. Rose, M.D. Court House Saginaw
Wexford	County State U. S. Public Health Service Rockefeller Foundation Children's Fund of Michigan	S. C. Moore, M.D. Cadillac
District No. 1 Kalkaska Missaukee Crawford Roscommon	Children's Fund of Michigan	R. B. Howard, M.D. Grayling
District No. 2 Oscoda Alcona Ogemaw Iosco	Children's Fund of Michigan	Frederick T. Zieske, M.D. West Branch
District No. 3 Antrim Charlevoix Emmet Otsego	Children's Fund of Michigan	Carleton Dean, M.D.
District No. 4 Alpena Cheboygan Montmorency Presque Isle	Children's Fund of Michigan	Stanley A. Stealy, M.D.

TRAINING COURSE FOR HEALTH OFFICERS

A new group of health officers and public health nurses will start work November 10 in the training station maintained by the Rockefeller Foundation at the Michigan Department of Health offices in Lansing. The course this time will be for six weeks instead of the usual three months. The regular plan of class work and field observations will be followed.

TULAREMIA

Now that rabbit hunting time has come again, tularemia assumes a position of interest. Michigan has not had extensive experience along this line, but there is apparently always the possibility of infection in a state where rabbit hunting is popular. Physicians sending blood specimens to the State Department of Health Laboratories for tularemia tests are urged to use the usual blood containers furnished by the Department.

INDUSTRIAL HYGIENE

The function of the Industrial Hygiene Bureau is to deal with the problem of health affected by employment. During the past year health surveys have been conducted in 55 establishments, including manufacturing, commercial, public utility corporations and industrial hospitals. There have been many conferences, also, with officials of the companies where surveys were previously conducted.

In addition to gathering data these visits have afforded opportunity to discuss with the company officials, the physicians and others concerned with the health care of employees some of the special functions of a plant health department; also to consider adequate equipment and personnel, and methods of conducting the first aid work in various types of establishments.

Some of the outstanding problems, on which there are frequent requests for information, are the cost of maintaining a plant health department; the extent of physicians' and nurses' service; location and equipment of first aid rooms; certain health hazards and occupational diseases; records of injuries and illness and methods of reporting same.

The bureau now has considerable information on conducting health work in Michigan industries, from which some estimate can be made on the probable cost of such

service for employees in various sizes and kinds of plants. Several companies have asked for information on this problem. All such requests for assistance or advice on equipment and supervision of first aid service will be responded to as far as possible.

As to physicians' and nurses' services in plant health departments, it is discovered that many well intentioned employers are thoughtlessly or ignorantly—seldom willfully—violating the Medical Practice Act. The bureau is endeavoring to advise employers that first aid men and industrial nurses should not be required or allowed to practice medicine or surgery solely on their own initiative in order to meet the demands for first aid service often imposed upon them by the management, in lieu of a physician's supervision. Sufficient information on the comparative benefits is at hand to assure employers of the great economic importance to them of having a physician's early attention or inspection in injury cases.

More firms are now engaging physicians on daily "part-time" service, rather than "on call." On this plan the doctor can see and direct the treatment, if necessary, of every case of injury occurring in the plant during the 24 hours. He can also note endangering physical conditions of any employees and direct them to their family doctor for attention on impending illness. This daily visit to the plant also enables the doctor to study conditions relative to the occurrence of accidents and illness, and others that contribute to disabilities, such as poor sanitation and new processes and materials used. The doctor is thus able to note certain health hazards and conditions producing them, as well as occupational diseases, and to advise the employer, the safety director and the employees on constructive measures for prevention or control of such conditions. These firms declare that such service is a great protection to them as well as to the employees.

On account of the preventive measures made possible through it, this daily part-time service of physicians is recommended for that large number of firms that do not care to, or are not justified in having a physician full time.

As to location and certain conditions that should be maintained in any first aid department, we strongly recommend separate quarters and away from machinery rooms

for privacy, cleanliness and quiet. The value of these three factors is fully considered in many plants, and as managers are led to see their importance in the care of the injured or ill in any plant, they are striving for improvements to that end.

On the sanitary and other health hazard problems in industries, the Michigan Department of Health works in close coöperation with the Department of Labor and Industry.

F. A. P.

SCHOOL HEALTH

A new "Tentative Course of Study in Health Education" is being sent to teachers of eight-grade schools by the State Department of Public Instruction. The course is the result of several months of work on the part of a committee assisted by special teachers and school administrators acting in an advisory capacity. It was prepared especially for rural schools. A second

course of study designed for twelve-grade systems is now at the printers.

It is felt that the suggested course of study will do much to coöperate health education work already being carried on by teachers, as well as to stimulate new effort.

The preparation of the course was greatly facilitated by the coöperative arrangement between the Children's Fund of Michigan and the State Department of Public Instruction for the promotion of health education.

CHILD HYGIENE NOTES

Montcalm County is having a series of child care classes taught by Minnie Vollmart, R.N. Miss Vollmart is a recent addition to the staff of the Bureau of Child Hygiene and Public Health Nursing.

Child care classes are being carried on in Lenawee County by Helen Linn, R.N.

The prenatal and infant nursing program in Alpena County terminated November first.

FAMOUS MEN IN MEDICAL HISTORY

BENJAMIN RUSH*

ROBERT CURRY

Benjamin Rush has been variously called the first great American physician, the American Sydenham and the modern Hippocrates, but in fairness to the antagonists and protagonists as well, let us call him the first famous American physician,—which truly he was, though Benjamin Franklin knew, perhaps, more medicine than Rush himself.

Let us project ourselves into that chaotic, fetal period of the colonies. You are more or less familiar with the political history of the time, but, in addition, let us remember the state of medicine at that time. Practically the only teaching of medicine was by the private practitioner, the student being but an apprentice, washing bottles, delivering medicines, holding basins in the universal process of blood-letting. As for the practise of medicine, it was probably as great an art as at present, but scientifically woefully meager. They knew and used mercury, cinchona, and digitalis, but the success

of these in a few cases led to their widespread use, so that on the whole probably they did more harm than good.

Philadelphia, the locale most concerned in Rush's life, was a tiny metropolis built on the marshes along the river front, with a dirty squalid stream running through its center, and entirely devoid of sewerage or water systems.

Into such an environment our hero was born on Christmas eve in the year 1745 in the township of Byberry, some 13 miles north of Philadelphia. He traces his ancestry to one Captain John Rush, friend and servant of Cromwell. With the Restoration the Rush family migrated to Pennsylvania with William Penn and became farmers, as were all the intervening generations to the time of Benjamin Rush.

Of Rush's early life little is known. He was the second son and fourth child in a family of six children. His father died five years after his birth and his training reverted to his mother, of whom Rush himself says, "As a mother she was distin-

*Presented before the Victor C. Vaughan Medical Society of the Medical Department of the University of Michigan.

guished by kindness, generosity and attention to the morals and religious principles of her children."

At the age of nine Benjamin, with his brother Jacob, who later became a member of the Supreme Court of Pennsylvania, was sent to Nothingham, Maryland, to an academy under the direction of his uncle, one Dr. Finley. He remained at Nothingham for five years studying Latin and Greek and a few minor subjects as mathematics, necessary for college entrance.

He entered the College of New Jersey, later to become Princeton University, at the age of fourteen and was graduated with an A.B. the following September, 1760. His biographers note that this is not so significant of Rush's precocity as of the low standards of education of the time. Rush, however, was a brilliant student, being adept at oratory and composition, and as such was persuaded by the President, Reverend Samuel Davies, to enter law.

This was generally agreed upon and carried out to the extent that arrangements were made to enter a prominent law office in Philadelphia. Before entering, however, Rush had an interview with Dr. Finley, his old schoolmaster, who pointed out the temptations of law and persuaded Rush to enter medicine. This he did in February, 1761, though he says that there were periods of his life when he regretted it and once thirty years later prepared to study law. He became apprenticed to Dr. John Redman, one of Philadelphia's leading physicians, and through him was permitted to observe several other men in their practise at the Pennsylvania Hospital.

Remaining with Dr. Redman for five years, Rush did not limit his field, but became interested in religion, writing and particularly in politics. In 1765 Rush loudly denounced the Stamp Act in all the patriotic phrases of the day and speaks of Franklin as the curse of Philadelphia. In the summer of 1766, he went to Edinburgh to study under Dr. Cullen, one of the disciples of Sydenham. He remained there two years. During that time he not only completed his work for his doctor's degree but learned by himself the Spanish and Italian languages and employed a tutor in French. It was during this period also that he began writing on educational subjects, an experience with which he was to influence later American education.

It is interesting to note that Rush's thesis, written in perfect Latin, was on the subject of "The Digestion of Food in the Stomach." He had no Alexis St. Martin, so he performed a series of three experiments by taking a powerful emetic three hours after meals. His scientific ingenuity, at least, is less than that of Spallanzani, who spared his stomach with a sponge and a string.

From Edinburgh, Rush went to London, where he stayed at the home of Benjamin Franklin. Through Franklin he met and talked with the greatest men of the day, among them William Hunter, Samuel Johnson, and David Hume, the great historian and philosopher. Also through Franklin's influence Rush studied in France several months and while there, in addition to ascertaining the state of medicine, he became acquainted with Diderot and Mirabeau.

Soon afterward Rush returned home to Philadelphia and almost immediately, in June, 1769, was appointed Professor of Chemistry in the College of Philadelphia, the first American medical school. At the same time he started to build up a practise, and having no wealthy connections, he says, "My shop was crowded with the poor in the morning and at the mealtimes and nearly every street and alley was visited by me every day. I have often remained with them long enough to administer my own prescriptions, particularly bleeding, with my own hands."

Rush apparently created some antagonism among his fellow practitioners from the beginning by introducing and practising Dr. Cullen's (Sydenham's) system of medicine in the face of that in vogue at the time. In spite of opposition, Rush, by the force of his personality and by his artful writings, was able to progress rapidly and by 1776 had a large practise, a generous following of students and the jealous envy of many less successful physicians.

In January, 1776, Rush married Julia Stockton, the daughter of one of the signers of the Declaration of Independence. She was at that time 17 years of age and had some local fame for her beauty. To them were born thirteen children, nine living to maturity. Of these one, Richard, became famous as a lawyer, as Attorney General and Secretary of the Treasury.

Of Benjamin Rush's part in the Revolution I shall have little to say, as the succeeding paper will be concerned with that. Suf-

fice it to state here that Rush was one of the "after-signers" of the Declaration of Independence, having been elected to Congress after the original declaration on July 4 and before the final engrossed copy on August 2. Rush was a member of Congress for one session only, not being returned to office after February, 1777.

Professionally Rush was appointed Surgeon of the Pennsylvania navy and for his illustrious services appointed Surgeon-General of the Middle Department of the Continental Army. This title was soon changed to Physician-General. In this position Rush was under Dr. Shippen, against whom he soon became opposed, believing Shippen guilty of gross mismanagement. Rush finally appealed to Washington personally, but the latter was equally as helpless as Shippen to remedy conditions in the hospitals because of lack of funds, so that Rush became estranged also from Washington, at least politically, and was even accused of being a member of the Conway Cabal. As a result of these breaks Rush resigned his position in 1778 and retired to practising and teaching in Philadelphia. All famous men seem to have made at least one great mistake and this resignation is considered Rush's. At any rate Rush wrote many letters to Patrick Henry and Washington's nephew, attempting to justify his position without losing dignity.

Rush's last purely political stroke was as a member of the Pennsylvania Convention of 1789, when his arguments were instrumental in influencing that body to ratify the Constitution of the Colonies.

In January, 1779, the College of Philadelphia, closed during the war, was reopened and Rush again took up his lectures. Several months later, however, the new political regime attacked the charter of the college, dissolved it and erected in its stead the University of the State of Pennsylvania. Thus Rush was again out of a professorship and remained so until 1789, when the law of 1779 was repealed and the original college reestablished. One of the original faculty was missing (Dr. Morgan) and Rush was duly appointed to the Professorship of the Theory and Practise of Medicine, the first medical chair in America.

In 1791 the College of Philadelphia and the University of the State of Pennsylvania were united to form the University of Pennsylvania and Dr. Rush then acceded to the

chair of the Institutes of Medicine and Clinical Practise. In 1796 he received the additional appointment to the chair of the Practise of Physic. This three-fold professorship Dr. Rush held to the end of his life.

Rush's attractiveness as a teacher is evidenced by the fact that over two thousand students passed under his surveillance and his classes increased from twenty to over four hundred in the course of his long career as a teacher. In addition he had several private pupils, apprentices, such as he himself had been to Dr. Redman.

On April 15, 1813, Rush was stricken with a fever and died four days later. It was stated the malady was typhus fever, but accounts seem to indicate that it was actually pneumonia.

In reviewing Rush's life we notice three outstanding characteristics: versatility of interest, a multiplicity of literary efforts, and an untiring tenacity and persistence.

As to the first, his participation in politics, education and medicine is ample evidence. As to Rush's literary works I shall confine my remarks to his medical works. Included in these is his most famous treatise entitled "An Account of the Bilious Yellow Fever, as it appeared in Philadelphia in 1793." This has been pointed out as the most accurate description of any epidemic ever written. From an objective standpoint this is entirely true and in reading it one certainly gets a vivid picture of the scourge which took a toll of 4,000 people out of Philadelphia's 40,000 in a period little more than two months. But looking at it from this is entirely true and in reading it one certainly gets a vivid picture of the scourge yond describing what he saw his deductions were far wrong. In his own words, "Upon coming out of Mrs. Le Maigre's room I remarked to Dr. Foulke and Dr. Hodge that I had seen an unusual number of bilious fevers, . . . The origin of this fever was discovered to me at the same time from the account which Dr. Foulke gave me of a quantity of damaged coffee which had been thrown upon Mr. Ball's wharf and which had putrefied to the great annoyance of the whole neighborhood. After this consultation I was soon able to trace all the cases of fever which I have mentioned to this source." In spite of the fact that coffee was not present in succeeding epidemics, the Doctor persisted in this opinion.

In his treatment of yellow fever, all the common modes of treatment having been tried without success, Rush started to search for something more efficacious. He looked for it in his library and found it in the works of a Virginia botanist of fifty years before. The latter recommended purges to relieve the abdominal viscera of their miasmata. He says, "This evacuation must be procured by lenitive chologogue purges. I adopted this theory and practise and resolved to follow them. It remained now only to fix upon a suitable purge." The purge he "fixed upon" was "jalap and calomel," ten grains of each, the now famous "ten and ten." He continues in his true dogmatic style, "I resolved after mature deliberation to prescribe this purge. Finding ten grains of jalap insufficient to carry the calomel through the bowel in the rapid manner I wished, I added fifteen grains of the former, but even this was uncertain and slow and I then issued three doses to be given every six hours." He cites the case of Richard Spain, who took "eighty grains of calomel and somewhat more of jalap and rhubarb on the last two days of August."

"But," says Rush, "I did not rely on purging alone to cure the disease," and, true, he did not, as he pushed the evils of blood-letting as Sydenham and Cullen never thought of. In addition he made application of cold water which consisted of throwing pails of water over the naked patient.

As to the blood-letting, Rush had been unsuccessful with his first few patients, but reasoned that it was because he had been that disease should be left to Nature or be taken entirely from her hands. Rush chose the latter course and his blood-letting became more drastic than his purges. He bled as soon as fever appeared and continued to bleed daily as long as it lasted. He mentions at least five cases from which he withdrew over 100 ounces of blood each within a period of five days and he took over thirty ounces from a nine year old girl in five bleedings.

Perhaps we cannot blame Rush for these things when we consider the time in which he lived, but some of his conclusions are remarkably absurd and dogmatic in the face of facts. In the end, the only disease which Rush admitted offered him any trouble was hydrophobia and even this he could con-

trol with judicious blood-letting and mercurial salivation. He said his treatment would not only cure, but prevent yellow fever and this in the face of the facts that two of his apprentices died of the disease and he himself contracted it near the end of the epidemic.

Unfair as it is to compare Rush with modern times, nevertheless, in many things he was not even up to the standards of his own time. He believed pulmonary tuberculosis to be non-contagious and to be benefited by exercise. In this respect he was even behind Galen. As ever, his specific was bleeding, digitalis and mercurial salivation.

Throughout his life, Rush had a flair for publicity and constantly his writings were in print. Yet in spite of his egotism he had a sincerity of interest and the courage of his convictions that made him a great philanthropist and an artist in the practice of medicine. This paradoxical attitude pervades his whole personality. He was a Signer of the Declaration, yet maligned Washington; the founder of Dickinson College and supporter of Princeton, yet strongly opposed to the study of the classics; the prime opponent of capital punishment, slavery, and use of intoxicating beverages, yet most extreme in his treatment of yellow fever and insanity; the founder of American psychiatry, yet the originator of a sort of phrenology.

In closing I should like to read two opinions of Rush by modern writers. The first is by Victor Robinson, M.D.:

"In every age, opposition to the cardinal doctrine of the healing power of nature, promulgated by Hippocrates, has been a sign of the obstructionist in medicine. Rush was conspicuous among those who sought to overthrow the Hippocratic maxim that nature heals and the physician is only nature's assistant. Everywhere he attempted to cast out nature by unlimited blood-letting and overdrugging—this famous physician was really a menace in the sick-room. Rush erred in joining the Conway Cabal against the father of his country, and he erred equally by denying the father of his profession. Due largely to Rush's influence our art lay in bondage to drugs until the Apollonian Osler liberated us from the medicine-spoon. Rush expressed his attitude plainly enough: 'It is impossible to calculate the mischief which Hippocrates has done, by first marking Nature with his name and afterwards letting her loose upon sick people. Millions have perished by her hands in all ages and countries.' No other evidence is needed of the status of Benjamin Rush in modern medicine.

"This note is written, not in detraction, but in evaluation, of Rush. He was a man of many sterling merits. He was the most prominent figure at the cradle of American medicine. But he fussed over the baby until he spoiled it. If he had only known enough medical grammar to be able to differentiate

between a conjecture and a conclusion—if he had only inquired more, and sermonized less! The history of medicine has no room for myths, and to say today that the work of Benjamin Rush belongs to the classics of medicine is to be guilty of myth-making. The ancient Hippocrates (460-370 B. C.) is modern; the 'modern' Rush (1745-1813 A. D.) is antiquated."

The second, diametrically opposed to the preceding, and perhaps fairer to Rush in that it judges him in his own time, is by J. C. Wilson, M.D.:

"To his [Rush's] contemporaries he was a man, not unlike other men, having his virtues and his faults, a good citizen, a skillful physician, kindly, courteous, benevolent, and on occasion having much fight in him. He was even known to have some fame in distant lands . . . To us who see him through the vista of one hundred years, he stands, not, indeed, the most conspicuous figure of a time brilliant with heroic men and deeds, but great among the greatest, and certainly the most striking and impressive figure of the medical life of America at that period or any period since . . .

"Is not his love of his fellow men set forth in every word and every page that he wrote? Rush has been compared with the great men in medicine. He has been called the American Hippocrates, the American Sydenham, and likened to Fothergill and Boerhaave. None of these comparisons is fair to him. He was great in his own right. Richardson calls him 'One of the most original and powerful men whom medicine has ever claimed for a son.' He was the first Great American Physician."

CONTROVERSIES REGARDING SYPHILIS

W. H. Guy, Pittsburgh, reviews the incidence of syphilis; the morbidity, incubation period and mortality of neurosyphilis; arsenic in optic atrophy, and whether arsenic is neurotropic. He says that arsenophenamine seems to have no selective affinity for the nervous system; in fact, one of the difficulties is to get the drug in contact with the diseased structures in syphilitic involvement of the central nervous system. The point to be made is that all sorts of accidents may complicate arsenical medication of syphilis, but proof does not exist that they are due to neurotropism on the part of arsenic. If it is considered that the small amount of arsenic deposited in the nervous system produces symptoms referable to these tissues, neurotoxic would seem to be the better term.—*Journal A. M. A.*

PREGNANCY AND LABOR COMPLICATED BY GRANULOMA INGUINALE

Lester A. Wilson, Charleston, S. C., reports the analysis of fourteen cases. It seems that there is a tendency of stillbirth and death of infants in granuloma inguinale. Granuloma inguinale is not of venereal transmission, as none of the husbands of these patients were diseased. The Negro race is far more susceptible than the white race. Under the influence of pregnancy the disease progresses rapidly, probably owing to the congestion of the parts; after labor the condition tends to improve. This series of cases shows that the uterus if not traumatized or infected by handling can take care of a great deal of injection.—*Journal A. M. A.*

OF GENERAL MEDICAL AND SURGICAL INTEREST

EUROPE LEADS U. S. IN MEDICO-LEGAL WORK

European countries are far ahead of the United States in the practice of legal medicine, Col. Calvin Goddard of the Scientific Crime Detection Laboratory of Northwestern University told members of the Association of Military Surgeons of the United States at their recent meeting in Washington.

In 13 European countries which he just visited, Col. Goddard did not find a single police commissioner who was not either a doctor of medicine, a doctor of laws or a doctor of science. The medical expert for the court is a respected, honored person in Europe. He must have a degree in legal medicine as well as his regular medical degree, and he is expected to find the facts, not to help convict a prisoner or suspected criminal.

At the Northwestern University laboratory, work paralleling that of the medico-legal institutes of European countries is being undertaken. Identification of bullets with the guns from which they were fired; analysis, examination and identification of material scraped from the finger nails of a dead man or a suspect; and lectures to state's attorneys, police lieutenants, and detectives are among the many ways in which the new laboratory is assisting in clearing up crimes. The laboratory or school is the first of its kind in this country. Considerable apathy mixed with an encouraging amount of enthusiasm is being met, Col. Goddard reported.—*Science Service.*

AIMS OF MENTAL HYGIENE

One of the important approaches to mental hygiene is the question of parent education. There are two types of parents: one type which believes that the child is born into the world to satisfy the parents' emotional needs, and the other type which believes that parents live solely for their children. Both extremes produce difficulties. In a mental hygiene program it is important to study parental reactions and their bearing upon the behavior problems of children. Parents are the product of their own parental reactions.

Each new experience should enrich the child to grow up and become more mature; it should enable him to maintain an air of adequacy, dependability and self-sufficiency. The child should have security in the home, opportunities for development, a chance to have companionship of his own age, good health, absence of congenital and organic defects, and a recognition of his part in the family group, in order to have soundly integrated personality.

Wherever one finds marked differences between the children of a family, we must undertake to provide opportunities which give outlet to the unique ability of each child, no matter what direction these abilities may take. The short-sightedness of parents who try to develop their children along lines in which they themselves are interested or capable is a cause for much unhappiness.

It is mainly because so much of the baby's early mental development has to do with the learning of bodily control, which we take for granted, that we do not recognize the mental activity that is going on. Much harm has resulted from ignorance of parents as to the rate of development growth in body and brain.

The mental hygiene clinic should have, as another one of its major interests, the study of emotional problems and difficulties of adults which are not severe enough to produce hospitalization. It is especially in this particular field that the value of the nursing profession exists. In psychotic individuals we feel that nursing care probably offers the best approach to the patient's difficulty. In the first place the nurse is in constant care of the patient and can follow his condition more closely than the physician. We rely upon nurses to obtain detailed observations which are most necessary in getting an adequate picture of the patient. The mental state often changes and it is only by recorded data that we can understand conditions. Often the sympathy and understanding of a nurse can elicit information from a patient who is repressed or fearful. However, the value to mental hygiene from the nursing profession is even greater in the group of visiting nurses. Often when they are in the homes and communities they can do much in aiding individuals to adapt by assuming responsibilities regarding health and maladjustment problems. Child guidance clinics should utilize the resources of the nursing profession to aid them in carrying out their treatment plans.

—L. A. Schwartz in *Michigan Nursing Journal*.

FIRST SCIENTIFIC DOCTORS WERE MILITARY SURGEONS

The military surgeon of ancient times was the forerunner of our scientific doctors, Dr. William H. Wilmer, head of the Wilmer Ophthalmological Institute, Johns Hopkins University, Baltimore, told members of the Association of Military Surgeons of the United States at their Washington meeting. Dr. Wilmer is president of the organization.

"Military surgeons were the forerunners of medical science," Dr. Wilmer said. "Disease and obscure injuries were supposed to come from the displeasure of gods and demons and were treated by magic. Injuries of battle, however, were inflicted by human agents. They were understandable and necessitated some crude knowledge of anatomy and physiology; for they had to be treated by methods more rational than incantations."

Dr. Wilmer traced the history of military medicine from the time of ancient Egypt to the World War. Among the distinguished military surgeons of our own country were William Beaumont, who did pioneer work on the digestive tract; Jonathan Letterman, who organized a method for rescuing the wounded in battle and for transportation, supplies and hospitalization; Walter Reed and James Carroll, who established the transmission of yellow fever by the mosquito, and William Crawford Gorgas, who translated this knowledge into practical results.

Dr. Wilmer regretted the lack of interest in military surgery shown at present as evidenced by the drop in membership of the organization. He urged the surgeons not to forget the war-time lessons of the evils of lack of preparedness, and reminded them that preparation for war is one of the most efficient means of preserving peace.—*Science Service*.

HUMAN SKIN HAS BACTERIA-KILLING POWER

Human skin is more than a mechanical protection against infectious diseases. It is an efficient external organ for killing pathogenic microorganisms, or disease germs.

Drs. Harry A. Singer and Lloyd L. Arnold of the Research Laboratory, State Department of Health, Chicago, applied broth cultures of disease-producing bacteria to skin surfaces. They found that within

ten minutes from 90 to 95 per cent of all the bacteria were killed. The germs of typhoid fever were among the bacteria most readily killed by human skin.

These results, however, were obtained only with clean skin. On dirty or greasy skins the same bacteria survived for many hours. The finger-nail region was deficient in bacteria-killing power.—*Science Service*.

OLDEST U. S. MEDICAL SCHOOL CELEBRATES

America has been producing her own doctors for 165 years. Ten years before the Revolution, two young Philadelphia doctors who had had to go to Scotland for their own medical training, founded the first medical school in our country. The young doctors were John Morgan and William Shippen, Jr. Each later served for a period as Medical Director-General of the American Army. The school they founded is the University of Pennsylvania Medical School.

Besides Morgan and Shippen, the first faculty included Adam Kuhn of Germantown and Benjamin Rush, one of the signers of the Declaration of Independence. These men and those who followed them helped to make medical history in the United States.

The school started in a wooden building known as Surgeons' Hall. It progressed from there to some rooms in the mansion built by the State of Pennsylvania for George Washington. Now it occupies its own modern buildings where every kind of equipment for teaching and practicing medicine is at hand.

The development of the medical clinic of today was discussed at the 165th annual celebration by Prof. William H. Welch, "dean of American medicine."—*Science Service*.

INTRADERMAL, SCRATCH, INDIRECT AND CONTACT TESTS IN DERMATOLOGY

Four types of sensitization tests have been made by Maximilian A. Ramirez and Joseph Jordan Eller, New York, on a series of 500 patient with dermatoses in whom the etiology was suspected to be of allergic origin. From 200 to 400 tests were done on each patient. As a result of their observations they are convinced that sensitization tests are a distinct aid in the diagnosis of dermatoses if carefully performed and intercepted. A thorough and complete immunologic survey must be done in each individual patient and tests repeated when necessary. The patch or contact method of testing is superior to other methods in determining susceptibility to external irritants, particularly those of nonprotein structure. The intradermal method of testing is more sensitive than the scratch. It is more apt to produce false local reactions as well as alarming systemic reactions in the highly sensitive. It is preferable to use the scratch method first and check up with the intradermal. The indirect method of testing, using the principle of local passive transfer as demonstrated by Prausnitz and Kustner, has its field of distinct usefulness. This is particularly true in very young children, in whom it is difficult to do a large series of tests. It is also useful in patients with a persistent hyperirritability of the skin and when the dermatosis covers such a large area that direct testing would be impracticable. The indirect method of testing has its limitations. One cannot always demonstrate the presence of specific reagins even in cases proved to be specifically sensitive. It is not especially useful in cases hypersensitive to external excitants of non-protein nature.—*Journal A. M. A.*

THE JOURNAL

OF THE

Michigan State Medical Society

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DECEMBER, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

THE INDUSTRIAL ENIGMA

"I was ever of the opinion that the honest man who married, brought up a large family, did more service than he who continued single and only talked of population," said the Vicar of Wakefield, and he proceeded to put his theories into practise. But all this was in rural England before the industrial revolution was ushered in with the perfecting of the steam engine by James Watt in 1781. Population has been a recrudescence problem. Sometimes countries suffer for the lack of it, sometimes because populations are too great, leaving it to famine or war to reduce the number of people. During the early decades of American history popula-

tion appears to have been the one thing desired, and the extended hand was offered to the oppressed of Europe to come over and to partake of the blessings of this land of freedom.

Up to 1890 the crowded populations of the eastern seaboard migrated west until there was no longer any undiscovered country. Population of the United States increased by immigration and by natural causes. With the beginning of the present century came the development of the automobile and accessory industries and with them the extension of highways. Through these, work was liberally provided until the time of the great war. The world holocaust of 1914-18 consumed not only millions of men, women and children, but furnished work with abnormally high wages to those who were left.

Following the peace of Versailles there has been an unprecedented revolution in the matter of labor-saving machinery. In fact we are living in the so-called machine age. This mechanization of life has given rise to a constant unemployment problem. From morning until night there is contact with machinery of some sort. Households are geared to the tempo of machines. Rural life is revolutionized by the telephone, radio, automobile and chain store. With the introduction of machines which affect all departments of human industry there is transfer of rural to urban population. Everywhere today the machine replaces manual activities, not only in towns and cities but also on the farm. The scarcity of farm labor was soon supplied with labor-saving machinery so that now the trek back to the farm is unnecessary. Unemployed persons fare even better in the city than in the country.

* * *

In the latter part of the eighteenth and first part of the nineteenth century there lived a famous man by the name of Robert Malthus who made the first serious and we might say scientific study of the problems of population which has since his day been known as the Malthusian theory. In brief the doctrine taught by Malthus was that population unchecked increases in a geometric ratio but subsistence increases only in an arithmetic ratio and population increases up to the limits of the means of subsistence. The increase in population beyond these

limits is prevented by the positive checks of war, famine, pestilence and by the influence of vice and misery. Malthus condemned the poor-law system of his day with its indiscriminate doles and bounties for large families as tending to aggravate the very evils it was hoped to remedy. Malthus would substitute "moral restraint," by which he meant the postponement of marriage and the practice of what has been since called birth control. He met with a great deal of criticism and denunciation from the people of his time. Nothing daunted, however, he proceeded to carry on his studies with the result that his work on population contains much evidence that has not been refuted and the book is looked upon as an authority on the subject even up to the present day.

* * *

An editorial in a recent number of the New York Times in commenting on theories about hard times quotes a Viennese authority on the subject of over-population. In Europe there are many more millions of people looking for jobs than during the year before the war. Germany's present working population is seven million more than it was in the year 1913 and England's is said to be four million more than it was the year before the war. That of France is only about one hundred thousand more than in 1913. The war losses in human life have been made up for several years. Medical science has gone so far towards eliminating the results of infection that the disease factor in keeping down population has been largely eliminated. This in fact is the healthiest period that mankind has ever known due to the unprecedented attention to sanitation as well as the general progress of medicine in the treatment of disease. The Viennese professor agrees with Malthus that the only way to mitigate the evils of over-population is rigorous birth control.

I am neither an advocate nor an opponent of birth control. It has been in existence long before Malthus' time. Today large families appear, with comparatively few exceptions, among a class that can least afford to support and train them. However, the hope of reforming society in this respect seems remote.

* * *

There is an old proverb which seems to contain a world of wisdom: "Without vision the people perish." Not only are the great

mass of the people without "vision," as witness the ease with which they fall victims to high pressure salesmanship and installment buying, but there has been failure to develop men capable of taking a long range view of things. Our great need today is industrial statesmanship. It is hard to estimate what might be accomplished if as much care were exercised in the selection and training of the proper persons in both political and industrial statesmanship as for example in medicine or engineering. The idea of democracy has such a hold on us that we even elect men to technical positions of the requirements of which we know nothing. Never in the history of the world has ingenuity of man accomplished so much. He seems to have acquired the ability to control in considerable measure the forces of nature both physical and chemical but control of social relations is quite another matter. What might be accomplished if we would relinquish to a certain extent our voting privileges, confining them to the wholly untechnical positions, and make many of the positions for which politicians now scramble a career for those only who had achieved the requisite training? There may be no panacea, but the proper training of selected men could not make a worse situation than that of which prevails at present in most countries.

Machinery, however, has been a great blessing to man. It has provided him with servants undreamed of by other generations. It has lightened his drudgery even if it has gone too far and at times relieved him of employment. It has provided him with leisure, but leisure for what? All this has come upon him so suddenly that he has not learned how to make use of his spare time. Early man relieved the tedium of life by hunting. Then came the pastoral or agricultural age. On occasions there is still reversion to the hunting stage. The machine age is supposed to have diminished the amount of boredom in the world but this is problematic.

* * *

The industrial enigma. What contributes to it? Has preventive medicine interfered with the principle of the "survival of the fittest" resulting in population in excess of those who can find sustaining employment? Is the deus ex machine to blame? Is it lack of industrial statesmanship? What is the

cause of the financial depression? We seem to be in the same position as Tantalus, the mythical figure who starved in the midst of plenty. There seems to be no shortage, in fact there is a surplus, of almost everything that contributes not only to the necessities but to the comforts of life. A widely known statistician comes forth with the answer that the world is just plain tired out and needs a rest. We partly agree. Those past forty-five or fifty who have borne the financial burden of the world are doubtless to a greater or less extent tired out. This does not apply to the youth of the land, however, to whom the future is always a great adventure. Many professional men and men of affairs have passed over the great divide during the sixth decade of their lives. During the next few years, physicians probably can do more than statisticians towards bringing back prosperity. Many have never learned other play than golf in their middle life and this they have taken up often more as a duty than recreation. There is need for mental adjustment daily. It is not things that affect us so much as our mental attitudes towards them.

THE PASSING OF DR. HICKEY

The death of Dr. Hickey removes from the medical profession one of its most noted members. He was a pioneer in his chosen specialty. Beginning as pathologist and otolaryngologist, following his graduation from the Detroit College of Medicine, Dr. Hickey recognized the possibilities of the X-rays as diagnostic means soon after their discovery in 1895. Himself an amateur photographer of no mean skill, it was natural that he should be attracted by this new method of photography. His interest in the subject of roentgenology was maintained until his death.

The X-rays afforded him an opportunity to pursue the subject of his first choice, namely pathology, but pathology in the living. Roentgenology enabled him to study abnormal as well as normal processes rather than end-results, particularly where such processes produced "variations in tissue density," to use an expression he so often used. A radiograph was "a record of density, not a picture."

Dr. Hickey's efforts were directed to a large extent towards the perfecting of technical processes in the production of the fin-

est quality in radiographs, and towards this end he contributed in the way of devices which made for better radiography. He impressed upon his students the fact that without the best possible plates anything approximating a correct diagnosis was impossible.

Dr. Hickey's ability as diagnostician is too well known to require relating here. During his years of practice in Detroit, he had so impressed himself on the medical profession of Wayne County that his word in the matter of X-ray examinations was considered final.

Among roentgenologists his reputation was more than national. He was known to every roentgenologist on this continent. It was a common experience when one of the Detroit X-ray men visited X-ray departments of European clinics, on being introduced as from Detroit, to be asked, "How is my friend Dr. Hickey?"

In 1922 the call came to a wider field which, though it involved financial sacrifice, gave an opportunity of extended service and influence as teacher. Dr. Hickey was made Professor of Roentgenology at the University of Michigan. With the opening of the new hospital, opportunity was afforded for the designing and equipping of the Department of Roentgenology. The splendid institution is evidence of Dr. Hickey's skill. No man could have fitted into the new surroundings in which he found himself rather late in life, as professors are appointed, to better advantage than he. During the past eight years, many young men both here and some from abroad have acquired their training under him. He seemed happiest when surrounded by students, and always appeared to enjoy his work.

The Detroit X-ray and Radium Society was founded by him and by unanimous voice he was made the first President. Much to the benefit of the Society, Dr. Hickey maintained his interest in the organization to the end. The November meeting was to have been held in his department at the University Hospital but was postponed owing to his death.

While devotion to his work prevented him from being officially active in the Wayne County Medical Society or Michigan State Medical Society, the fact that he held almost every office in any special society (particularly the American Roentgen

Ray Society) to which he belonged showed the unique place he held in the esteem of those in position to best judge of his great ability and his devotion to his chosen calling.

THE PRESIDENT-ELECT

The position of "President-Elect" is not by any means an experiment. It has been the rule in the American Medical Association for many years. The practice has the



DR. CARL F. MOLL

merit of giving a president a year's experience as an observer and may we say advisor, with the knowledge that at the end of that time he will take on the responsibility of the president's office.

Dr. Carl F. Moll, the first President-Elect, is an influential member of the Genesee County Medical Society as well as a member who has always shown a keen interest in the affairs of the Michigan State Medical Society. He has been a delegate from the Society to the American Medical Association since 1925.

Following graduation in 1899, Dr. Moll was on the staff of the Mines Hospital, Ish-

peming, associated with the medical veteran Dr. F. A. Felch. Dr. Moll has seen pioneer life among the miners and their families even though he cannot claim the length of years that are commonly associated with the pioneer.

His relations with others may be described by the adjective "friendly." He is gifted in conversation and has a remarkable memory for detail. A lover of books, Dr. Moll is a discriminating and critical reader. He has a well developed sense of humor and appreciates a good joke whether on himself or on the other fellow.

One of Dr. Moll's friends writes: "I have never heard from him an unkind word or one in depreciation of a fellow practitioner, not that his attitude is negative, but because of a large charity for human failings and lapses. Concerning these he is amused or silent or he ignores them, but is never censorious." This is a high tribute to pay to any man. These are the equalities of heart that, given the education, go to make a man a great physician. We are reminded of Osler's qualification of the true physician: "In the physician or surgeon no quality takes rank with imperturbability, and I propose for a few minutes to direct your attention to this essential bodily virtue. Imperturbability means coolness and presence of mind under all circumstances. Coolness in storm, clearness of judgment in moments of grave peril, immobility, impassiveness. . . . The physician who betrays indecision and worry and who shows that he is flustered and flurried in ordinary emergencies loses rapidly the confidence of his patients."

WRITING MEDICAL PAPERS

With the arrival of the annual meetings of medical societies the editors of the Journals published by the various medical associations are supplied with copy for an indefinite time. Any suggestion regarding the preparation of medical papers, however, is not out of place at any time. We pass on the following from Bertrand Russell which appears in his latest book, "The Conquest of Happiness."* Much has been written about the influence of the unconscious mind upon the conscious but there has been much less study and investigation of the effect of the conscious upon the unconscious. Most of

*The Conquest of Happiness, by Bertrand Russell, 1930. Horace Liveright, Publisher.

the unconscious, says Bertrand Russell, consists of what were once highly emotional conscious thoughts that have now become buried. And now: "It is possible to do this process of burying deliberately, and in this way the unconscious can be led to do a lot of useful work. I have found for example that if I have to write upon some rather difficult subject, the best plan is to think about it with very great intensity—the greatest intensity of which I am capable—for a few hours or days, and at the end of that time to give orders, so to speak, that the work is to proceed underground. After some months I return consciously to the topic and find that the work has been done."

Russell goes on to say that before discovering this technic his inability to make progress was a source of great worry and consequent unhappiness. We pass this on to our readers who are in the throes of giving birth to some line of thought for publication.

THE SCIENCE OF MEDICINE*

Lord Moynihan in an address delivered at the opening of the Banting Research Institute of the University of Toronto proclaimed medicine to be the parent of all the sciences and maintained that the development of every branch of human knowledge depended upon principles brought into existence and elaborated by men engaged in the practice and teaching of medicine. After the so-called Dark Ages, medicine again took up the lead and fostered the growth of the natural sciences. Hippocrates was the first to establish the inductive method—namely the enunciation of a general rule from the observation of particulars. Galen, Lord Moynihan tells us, gave us the deductive method, the method of trial by experiment. One deals with facts already in existence; the other created facts as needed. The induction method of Hippocrates—observation and inference—must be the starting point of medical research. This of course must be supplemented many times by the deductive or experimental method of Galen. The latter method is one by which the conclusions of the former may be tested.

Lord Moynihan felt that physiology was drifting in an impractical direction. While animal experimentation as practised by the

physiologist had its place, man was notably a peculiar animal. Quoting the *Lancet*, "He walks upright; those who study fever may well ponder Owen's remark that 'man is naked and is the only terrestrial mammal in that predicament.'" The results of experiment on mice cannot well be transferred to such a being. The argument is for more research in the hospital wards rather than in the laboratory.

Regarding surgeons we cull this gem:

"The great danger with which surgery is today confronted is that its technical procedures are so easily learnt, so frequently practised, and so amply rewarded that men who regard medicine as a commercial career can live prosperous lives without contributing a single fresh thought, the slightest modification of any known procedure, or the establishment of any new method, to Science or Art. The ideal surgeon is not merely one who operates, who carries out, perhaps with brilliant skill, an operation, the necessity for which or the scope of which is determined by another. He possesses a mind to discover and examine all the clinical features of a case with competence not less than that of a physician and with responsibility far greater, and then acts, when so required, not only as a therapeutic agent, but as one engaged in hominal research. The safe judicious surgeon who applies technical skill, prudence, and fine judgment to the relief of human suffering adds greatly to the repute of our profession and to the happiness of the world."

This is a lofty note, but what surgeon does not have a feeling of exultation in the thought of the possibilities of his calling?

CASE HISTORIES

This issue of the *Journal of the Michigan State Medical Society* contains an unusual number of case histories. A carefully compiled case history approximates more nearly to a contribution to medical knowledge than any other form of medical writing whether editorial or contributed paper. We say *carefully* compiled advisedly. Valuable case histories are based on close observation of symptoms, accompanied by the necessary laboratory examinations. This involves a fine discrimination in evaluating essentials and eliminating the non-essentials. The clinician making such a clinical examination should be in a position to draw valuable conclusions.

The medical reader is invited to write up any interesting case he may have. Some of these presented to our readers serve as good models.

WHAT DOES IT ALL MEAN?

The following is a quotation (newspaper) from the address of a Christian Science lecturer:

*The subject of an address delivered by Lord Moynihan at the opening of the Banting Institute, Toronto. The *Lancet*, Oct. 11, 1930.

"Now because mortals are brought up in the mental atmosphere of expectancy of sickness and trouble, they accept without protest what physicians and hygienists are pleased to call medical and health laws. At a certain age, a child must expect this or that ailment; adults, at different periods in their experience, are to look for this infirmity or that disease; and so it goes. If these be laws, who is their author? Certainly not that heavenly Father who the Bible declares is of 'purer eyes than to behold evil,' and from whom proceeds every good and perfect gift.

"Are they not products of that 'vail' cast over the nations—that ignorance of God which ever claims to obscure and mesmerize? Christian Science, therefore, takes the stand that these accepted medical opinions and fears do not constitute law, and that they can be annulled, one and all, by the glorious, strengthening, health-giving law of God, good. In fact, a Christian Science treatment has well been called the enforcement of law and the consequent annulling of every so-called law of materiality and disease."

We are reminded of the *bon mot* of Disraeli referring to his opponent Gladstone. "He is intoxicated with the exuberance of his own verbosity."

The industrial revolution which had its rise in England near the end of the eighteenth century is as important in affecting the life of the American continent as its influence on western Europe. The sigh is ever wont to be heard for the good old times. Oliver Goldsmith, the English physician-poet, lived even prior to the Industrial Revolution. In view of the present worldwide depression the following is significant:

"A time there was, ere England's grief began,
When every rood of ground maintained its man,
For him light labor spread her wholesome store,
Just gave what life required, and gave no more,
His best companions innocence and health,
And his best riches ignorance of wealth."

From tests recently conducted at the State Normal College at Bowling Green, Ohio, it would seem that the *habitual use of coffee will not increase the grade of the college student of Science*. Prof. E. L. Mosely, head of the department of biology, asked fifty of his students to indicate whether they had drunk coffee as much as a dozen times during the past year. Eleven of the fifty had had less than the specified twelve drinks of coffee. Of the eleven, five or almost half received the grade A in biology although only six from the whole class were given this high grade. Of the 39 who drank coffee, only one attained the mark A.—*Science Service*.

No wonder science gets the name at times of being visionary and impractical. Who would expect the drinking of coffee or the using of tobacco to give a student a grade A. On the other hand, who would expect their use in moderation to prevent a student's attaining that goal, provided all the other factors such as ability, application and industry were present?

"Man is a noble animal, splendid in ashes, and pompous in the grave, solemnizing natiivities and deaths with equal lustre, nor omitting ceremonies of bravery, in the infamy of his nature."—Anon.

"DON'T QUIT."

When things go wrong, as they sometimes will,
When the road you're trudging seems all up hill,
When the funds are low and the debts are high,
And you want to smile but have to sigh,
When care is pressing you down a bit,
Rest if you must, but don't you quit.
Life is queer with its twists and turns,
As everyone of us sometimes learns,
And many a failure turns about,
When he might have won had he stuck it out;
Don't give up, though the pace seems low—
You may succeed with another blow.
Often the goal is nearer than
It seems to a faint and faltering man.
Often the struggler has given up
When he might have captured the victor's cup.
And he learned too late, when the night slipped down,
How close he was to the golden crown.
Success is failure turned inside out—
The silver tint of the clouds of doubt.
And you can never tell how close you are
It may be near when it seems afar;
So stick to the fight when you're hardest hit—
It's when things seem worst that you mustn't quit.
—Anonymous.

"THE DOCTOR LOOKS AT FREE CLINICS"

(Dr. J. M. Robb in Wayne County Bulletin)

The function of our democracy is not to take care of the individual but to establish conditions so that the individual may take care of himself. This basic principle is being forgotten so frequently in these days of depression and social unrest that it might be well again to call it to the attention of those socially minded, who are in danger of developing too paternalistic an attitude toward the less fortunate.

In this social perturbation, the medical man is the first one to get the reaction, for the physical and mental well-being of the individual is the first thing to suffer. Times are hard, there are no funds, yet the doctor carries on. Right here the physician must prove his mettle and take the best possible care of these people, because, if he does not, the clinics will receive them and he still must take care of them without the satisfaction of real altruism.

The social agencies are overcrowded and the layman takes a hand. To him who is unaccustomed to clinic psychology there is a moral exhilaration—almost the feeling of a votive offering—to see that all are taken care of. The layman receives the credit for the task undertaken, but it is only through the silent labors of the physician the solution is actually accomplished.

The medical profession occasionally receives condemnation at the hands of the laity because of its attitude regarding clinics. While the public's rational interest in the alleviation of human suffering is readily appreciated, the facts are that the physician, who does a good deal of this charity work, must face the problems with which he is confronted in a matter of fact way to prevent his outlook on life from becoming warped.

Every physician gives not only his time and money, but of himself in large measure.

To the man who practices medicine, this is his "inclement destiny," and the layman must look at it from his angle. He knows clinics, but because

he is somewhat benumbed to the thrills and does not enthuse, do not condemn him as lacking in social understanding.

Finally, the analysis of the sincerity of the clinic patient, at times, is extremely difficult, yet he draws the sympathy of all people. Too few realize that the feigned illness of the clinic habitue is the last refuge of a loafer!

"I am not sure what the unpardonable sin is but I believe it is a disposition to evade the payment of small bills."—*Elbert Hubbard.*

COMMUNICATIONS

VOLUME II, MEDICAL HISTORY OF MICHIGAN

It has been announced that Volume II of the Medical History of Michigan was to be off the press by November 20. The matter of printing Volume II has been accomplished, all except the index. The matter of making an index is Herculean in its proportions, demanding as it does not only the careful reading and noting of all names of important events mentioned in the History, arranging in alphabetical order, but checking and re-checking them as well. When once a book is published, that is final for the time being, and any errors or omissions cannot be corrected until in the course of several years a revision may be called for. We publish below a letter from Dr. Burr, the Editor and author, which is self-explanatory. We feel that those subscribers who have paid their money would prefer waiting a few days or weeks, as the case may be, for a complete volume, than to have it rushed to completion with a possibility of errors which more painstaking revision would have eliminated.

As stated, the volume is in type up to the index as an advanced copy of Volume II has been sent to Dr. J. B. Jackson of Kalamazoo, who so ably and so kindly reviewed Volume I. In spite of the delay in publishing Volume II, we think it best to publish Dr. Jackson's review in anticipation of the appearance of the book itself. This review will be found in the section entitled The Doctor's Library.—Editor.

Durant Hotel, Flint, Mich.
November 18, 1930.

Dear Doctor Dempster:

The all too hopeful announcements as to the distribution of the History have given me no little concern. As a matter of fact it is a long, long trail before Volume II can be put in the hands of the subscriber. I am very much worried over the situation.

An announcement should be made in the December Journal, pleading with subscribers to be patient. Proof is all read and the volume is on the press, but the index, which is a perfectly devastating matter, I am now reading and revising *in manuscript*, if you please. The One Above knows when it will be in proof and ready for publication. Aware as you are of the exigencies of proof reading, I believe you can have no conception of the colossal task. It is frightful in extent and complication and I am driven almost to distraction with it.

As you know, they have taken on this work at St. Paul, are doing it well and are preparing and checking over the index manuscript, but it must all be submitted to me because names without initials, which frequently appear, cannot be interpreted by anybody but myself. I have gotten along as far as B in the revision and with the balance of B and twenty-three or four other letters to look over, you will appreciate my predicament. Hence these tears! There is plenty of excuse for the disappointing slowness. As you know also, they have been in commotion in St. Paul, owing to moving, and are just about to open their new plant.

In case anyone should feel disposed to offer this set to a friend as a Christmas present, he will be obliged to send it out under the "if and when" plan of those who propose issuing bonds. Publish this letter if you wish to do so, but in any event, make some announcement in order that subscribers who have sent in their second instalment may withhold brickbats.

C. B. BURR.

Hillsdale, Mich.
October 30, 1930.

Dear Doctor Warnshuis:

Your recent letter expressing the action of the Council was duly received and is deeply appreciated by me.

It is with some regret that I sever my connection with the Council for I have always enjoyed my contacts with its various members. Their action has always been one of disinterested and unselfish service for the Michigan State Medical Society and for the medical profession and I hope will always continue to be such in the future.

The memory of my association for ten years with the Council will always be a happy one.

Very sincerely yours,

BURT F. GREEN.

*I think I could turn and live with animals,
They're so placid and self-contained,
I stand and look at them long and long,
They do not sweat and whine about their condition,
They do not lie awake in the dark and weep for their sins,
They do not make me sick discussing their duty to God,
Not one is dissatisfied, not one is demented with the mania of owning things,
Not one kneels to another, nor to his kind that lived thousands of years ago,
Not one is respectable or unhappy over the whole earth.*

—WALT WHITMAN.

"I am more convinced than ever of the futility and worse of the licensing system and think with Adam Smith that a mediciner should be as free to exercise his gifts as an architect or a mole catcher. The public has its own shrewd way of knowing who should build its house or catch its moles, and it may be quite safely left to take the same line in chasing a doctor."—John Brown.

GENERAL NEWS AND ANNOUNCEMENTS

Dr. James Inches has been elected to honorary membership in the Wayne County Medical Society.

Dr. D. S. Brachman of Detroit has returned from a six weeks visit to London, England.

Dr. H. E. Randall of Flint addressed the staff of the Hurley Hospital recently on "Cancer of the Breast."

Dr. Walter J. Wilson, Jr., son of Dr. Walter J. Wilson of Detroit, is spending a year in London, England, taking special work on the heart.

Dr. Richard N. McKean of Detroit delivered an address before the Genesee County Medical Society on October 22nd on the subject "Chronic Nephritis and Hypertension."

Col. P. M. Ashburn, Librarian of the Army Medical Library, War Department, Washington, D. C., delivered an address before the Wayne County Medical Society on the evening of Armistice Day.

A subscription dinner in honor of Madame Zavadskaia of Curie Institute, Paris, was held at the Women's City Club, Detroit, November 17, under auspices of the Blackwell Medical Society.

Dr. George McKean of Detroit spoke on the subject, "The Latest Treatment of Hypertension," before the Jackson County Medical Society on the evening of November 18.

Dr. F. C. Warnshuis, Secretary of the Board of Registration in Medicine, reports 273 candidates as having been examined and passed at the State board examinations held at Ann Arbor and at Detroit last June.

"The Biological Bases for the New Conception of Life" was the subject of Mme. N. Dobrovolskaia Zavadskaia, M.D., of the Curie Institute, Paris, who was the speaker at the surgical section of the Wayne County Medical Society, November 18.

Dr. F. C. Warnshuis, Secretary of the Michigan State Medical Society, attended the annual meeting of State Secretaries held November 14 and 15 at the headquarters of the American Medical Association, 535 N. Dearborn St., Chicago, Ill.

The following members of the Michigan State Medical Society have been appointed to act on the Advisory Committee of the Woman's Auxiliary: Frederick C. Warnshuis, Grand Rapids; Louis J. Hirschman, Detroit; Walter H. Sawyer, Hillsdale.

When Eiffel was asked how long his famous tower would last, he replied, "Just as long as you keep the rust away with fresh paint." After spending half of your life getting an education it lasts only as long as you keep the rust off with fresh, new ideas.—*The Bulletin of the Genesee County Medical Society.*

The Fifth Annual Clinic of the Highland Park Physicians Club will be held December 4th at the Highland Park General Hospital. Details of the Clinic program appeared in the November number of this Journal. Following the Clinic, a dinner will be served in the General Motors Auditorium, Detroit.

The Radiological Society of North America will hold its sixteenth annual meeting on December 1 to 6, at Los Angeles, California. Among those from Michigan who will contribute to the program are Dr. Rollin H. Stevens of Detroit, Dr. Willis S. Peck of Ann Arbor, Dr. Arthur R. Bloom and W. L. Hull of Detroit.

The Bulletin of the Wayne County Medical Society publishes each week a "Program of the Week." Selecting one of these at random, that of the week beginning November 17, we count thirty-eight medical meetings ranging from Hospital Staff meetings to the regular meeting of the Wayne County Medical Society. Is there not a possibility of getting too much of even a good thing?

Drs. Frank A. Kelly, James E. Davis, J. T. Watkins and Clarence Owen of Detroit were witnesses introduced by the Lowell, Massachusetts, Sun in connection with a libel suit, Dugdale vs. The Lowell Sun. The jury after about two hours deliberation brought in a verdict for the newspaper. The Lowell Sun commented on the action of the Massachusetts State Board of Medical Registration, who cancelled the license of Dr. Dugdale. Dr. Dugdale is said to have employed the Koch Cancer remedy. The Detroit physicians were called as witnesses inasmuch as a few years ago they were concerned with the investigation of the Koch remedy for malignancy.

The Minnesota State Medical Association sponsors a weekly health service program broadcast over WCCO on Wednesday mornings at 11:15. This health talk is given by Dr. W. A. O'Brien of the University of Minnesota. Many people from this state, according to a letter received from the committee on Public Health Education of the Minnesota State Medical Association, have been listening in and have expressed their satisfaction to the committee. Among the subjects which appeared during the month of November were, Poliomyelitis, Treatment of Cataract, Carcinoma of the Lip and Mouth, and Psoriasis.

EXTENSIVE PROGRAM OF DENTAL RESEARCH

Unique among dental meetings in its plan of bringing together representatives of related fields, and at the same time characteristic of the new movement toward coöperative research, was the conference on growth held at Merrill-Palmer School in Detroit on September 7 and 8. The purpose of this conference, sponsored by the Children's Fund of Michigan and the Merrill-Palmer School, was to plan an enlarged program of research upon the

growth of the dental apparatus and related parts, under the direction of Samuel J. Lewis, D.D.S., following a preliminary five-year study completed and reported in 1929.* The program is to be financed by the Children's Fund of Michigan.

The fields of medicine, anatomy, and nutrition, as well as dentistry, were represented by the conference participants, who included Dr. Hugo Freund, President of the Board, Children's Fund of Michigan; Dr. Milo Hellman of New York City; Dr. T. Wingate Todd, Professor of Anatomy, Western Reserve University; Dr. B. Holley Broadbent, also of the Department of Anatomy, Western Reserve University; Dr. E. V. McCollum of Johns Hopkins University; Dr. Thomas B. Cooley, Chief of Staff of the Children's Hospital of Michigan, Detroit; Dr. Earl May of the Baby Clinic, Herman Kiefer Hospital, and Dr. William M. Donald, Chief of the Medical Staff, Protestant Orphanage, Detroit; Dr. Samuel J. Lewis, director, Dr. Ira A. Lehman, and Dr. M. A. Munblatt, Detroit dentists connected with the research program; Dr. A. C. Thompson, Detroit dentist associated with the City Department of Health; and Miss Edna N. White, Director, Dr. Charles A. Wilson, pediatrician, and Miss Mary E. Sweeny, nutritionist, of the Merrill-Palmer staff.

The conference was opened by Dr. Freund, who discussed the function of the Children's Fund in furthering such programs in the interests of child welfare. A tentative plan of procedure for a five-year program was then presented for discussion by Dr. Lewis. The following comprise the chief points of this program:

1. To make impressions of the teeth and dental arches of a group of five hundred children ranging in age from two to ten years, once a year for at least five years, these models to supply a record of the major and minor fluctuations in the development of the dental arches which will allow observations of the changes incident to the development of the teeth and of occlusion, and will permit the making of certain measurements upon which a curve of width and length growth of the dental arch can be based.

2. To make anthropometric measurements of the head and face in order to study the increase in size, changes of proportion and change in position, during growth; these measurements to be correlated with the growth of the dental arches.

3. To make dental radiographic studies of the entire group, both intraorally and extraorally, to determine how and when the deciduous teeth are shed and permanent teeth are erupted, and to obtain in addition, on the older children, some data upon the development of the third molars.

4. To make hand and elbow radiograms of the entire group once a year in order to secure certain correlations between dental growth and carpal and epiphyseal growth.

5. To make impressions of the upper arches of a group of newborn babies and to secure radiographic studies of their sinuses and jaws, in order to obtain measurements that will permit starting the growth curve of the dental arches at birth, thus making this curve comparable with other growth curves of the human body.

6. To take impressions of the teeth and dental arches of the parents of a selected group of fifty children, over a five-year period. Upon these children certain supplementary studies are to be made. Such a study, it is believed, may contribute data on

the difficult problem of the part played by heredity in dental growth and development.

7. To keep height and weight records of the entire group, in order that correlations between height, weight, and dental arch growth can be made.

8. To study the relation between diet and the growth of the dental apparatus.

9. To study the process of dental caries at the contact points of the teeth, through radiographic records of the posterior teeth made once every six months.

10. To study the eruption of the deciduous teeth in a group of babies at Providence Hospital and the Sarah Fisher Home.

During the two days of the conference the phases of growth forming the background for such a study, the special instruments to be used in the study and the technics to be followed in using them, the kinds of related data upon the child to be secured, and the methods and procedures to be followed in the various phases of the program were discussed.

Since the spring of 1930 a staff of dentists and technicians, under the direction of Dr. Lewis, has been working on the enlarged program, with headquarters at the Merrill-Palmer School. The Merrill-Palmer School, the Children's Hospital of Michigan, the Protestant Orphanage of Detroit, and the Methodist Children's Village are coöperating in supplying children and records for the study.

THERE'S NAETHING MAIR PRE- CIOUS NOR TIME

I sae Sandy, de ye min' the nicht yer Mither tauld us about yon chap Jonah an' his whale? Weel ye ken there's ane thing she didna tell. She didna ken that he was a quack. Aye, a quack I'm tellin' ye. Ye ken he was juist like a' thae quack doctors, in that he didna practice his profession the wy his Maister teacher tauld him to. He was too lazy to keep oop wi' his profession, an' he thocht he could get by his maister's een by takin' a sea voyage.

A' weel, there's a lot o' thae quacks wha' go on boat rides rather than wark at their profession, and are never foond oot, but Jonah couldna fool thae sailors. Ane look at that sea-sick face o' his was enouf. They grab'd him by the back o' the neck an' the hindermaist pairs o' his anatomy where his troosers are, an' cast him owre the railin' o' the ship.

Weel, I dinna ken how lang he swam roond in that pond afore the whale picked him up, but I hae enouf sense tae ken that as soon as the whale foond oot that it was haudin' a quack in its belly, it became seasick an' pok'd its lang neck owre the edge o' the pond an' puk'd up Jonah, then slipp'd back intil the sea swishin' an' swashin' like ony ither fish awashin' oot its mooth.

Now mind ye, Sandy, it did Jonah some guid tae hae that experience, aye an' it tell't the whale far mair about diet than it could learn in ony ither wy.

Of course, we're nae sae sure noo, that we could find oot some whale that would gie us a lift, by stanin' by whiles we gaithered up some o' thae quacks frae the toons roond aboot, but there's a lot o' thae chaps we'd like tae cast intil the sea, if we kenned there was a frisky whale hard by.—Weelum.

"Weelum" is a Detroit doctor of Scotch extraction who is somewhat diffident about revealing himself to the world at large. He is, however, to the manor born and as this little observation on Jonah and the whale will amply testify, his speech is cast in Doric mold. Our friend Weelum has promised to supply us with copy for future Journals whenever the inspiration is upon him.—Editor.

*Observations on Growth Changes of the Teeth and Dental Arches," *The Dental Cosmos*, Vol. LXXI, No. 5 (May, 1929), pages 480-499.

DEATHS

DR. PRESTON M. HICKEY

Dr. Preston M. Hickey died at Ann Arbor, October 30, 1930, of cardio-renal disease, after an illness of nearly a year. During the greater part of this time, however, he was actively engaged at his work as professor of roentgenology at the University of Michigan. Dr. Hickey was born at Ypsilanti, December 3, 1865. He was graduated from the University of Michigan, where he received the degree of B.A. in 1888. He obtained his medical training in Detroit, where he was graduated from the Detroit College of Medicine in 1892. From 1892 to 1895, Dr. Hickey was house physician at Harper Hospital. He was at first an otolaryngologist and pathologist but later became interested in roentgenology, shortly following the discovery of the X-rays in 1895. He was everywhere recognized as a pioneer in the development of roentgenology. From 1909 to 1922, he was professor of roentgenology at the Detroit College of Medicine and Surgery. He at one time also taught pathology in the Detroit College of Medicine. In the latter year he resigned his teaching position and also disposed of his X-ray practice to accept the position of professor of roentgenology at the University of Michigan. Dr. Hickey was a lieutenant-colonel in the medical department of the United States Army during the war and consulting roentgenologist to a number of army hospitals in France. He was founder and first editor of the American Journal of Roentgenology. He was at one time president of the American Roentgen Ray Society and organizer and first president of the Detroit X-ray and Radium Society. Dr. Hickey was a member of the Washtenaw County, Michigan State and American Medical Associations, also the Detroit Academy of Medicine. He was married in 1897 to Miss Grace Mahy. He is survived by his widow and three children, Mrs. True Pettengill, Walter Preston Hickey and Guy Ransome Hickey, all of Ann Arbor. The funeral was held from the Central Methodist Church, Detroit, the afternoon of November 2.

DR. WILLIAM R. HENDERSON 1860-1930

Dr. William R. Henderson of Detroit died on November 5th. Dr. Henderson was engaged in the general practice of medicine in Detroit for thirty-seven years. He was born at Exeter, Ontario, seventy years ago, coming to the United States when still a young man. He attended the Detroit College of Medicine and graduated from it in 1886. He practiced in Spicer, Minnesota, until 1893, when he located in Wayne County. With the passing of Dr. Henderson the city of Detroit loses a man who was a fine type of family physician who enjoyed a large practice of loyal and appreciative patients. Dr. Henderson is survived by his wife and two sons, Dr. William E. and Dr. Harold Henderson. The sons are engaged in the practice of medicine in Detroit.

*Knowledge and wisdom, far from being one,
Have oftentimes no connection; knowledge dwells
In heads replete with thoughts of other men,
Wisdom in minds attentive to their own.
Knowledge is proud that he has learned so much;
Wisdom is humble that he knows no more.*
—Cowper.

SOCIETY ACTIVITY

CONSTITUTION AND BY-LAWS

This issue contains the revised Constitution and By-laws as adopted at our annual meeting. Officers and members of County Societies are urged to preserve this issue for future reference.

COMMITTEE APPOINTMENTS

In the forefront of the Journal will be found a list of President Stone's Committee appointments. Note them and lend your support to these Committees.

ANNUAL SECRETARIES CONFERENCE

The annual conference of County Secretaries will be held in Ann Arbor during January. The exact date and program will be imparted in the January Journal and by mail notices.

MEDICAL HISTORY

The second volume of our history will soon be ready for delivery. The Council is somewhat disappointed because so small a number have subscribed for the set. At present we have on hand some 700 sets of this excellent historical narrative of medical events in Michigan. Every member should own a set. Why not subscribe?

As a suggestion you are requested to consider this history set as a suitable Christmas gift to your medical friends, your hospital or medical library. Your order will be promptly attended to. The price is \$10.00 for the two volumes. Please aid in distributing these 700 sets.

MINUTES OF THE NOVEMBER EXECUTIVE COMMITTEE MEETING

The Executive Committee meeting of the Council of the Michigan State Medical Society was held in the Statler Hotel, Detroit, on the evening of November 10, 1930.

Present: B. R. Corbus, Chairman; R. C.

Stone, President; C. E. Boys; J. D. Bruce; Henry Cook; George L. Le Fevre; J. B. Jackson, Ex-President; F. C. Warnshuis, Secretary.

1. Considerable time was spent in discussing the questions that were raised at the conference with the Officers and Legislative Committee of the Wayne County Medical Society. Upon nomination and appointment by President Stone, the Executive Committee confirmed the following Legislative Committee: J. B. Jackson, Kalamazoo; J. Milton Robb, Detroit; John Sundwall, Ann Arbor; Earl Carr, Lansing; A. H. Whitaker, Detroit.

2. The Secretary presented a tentative program for the Annual Conference of County Secretaries, which was approved. Upon motion of Boys-Cook, the date for the Mid-winter meeting of the Council was determined to be January 21, 1931, and the date for the conference of County Secretaries, January 22, 1931, in the Michigan Union, Ann Arbor, Michigan.

3. The Secretary reported upon the progress that was being made in issuing the second volume of our History and stated that the publishers had announced that the History would be ready for distribution about November 20th. Upon motion of Boys-Cook, the Secretary was instructed to enter into arrangements with the Ingram Company of Detroit for personal solicitation of physicians and sale of our history.

4. The Executive Committee devoted considerable time to discussion of amendments to the Michigan Crippled Children's Act, proposed by the orthopedic group of this state. Following the discussion on motion of Boys-Le Fevre, the entire matter of these amendments was referred to the legislative committee and this committee is to be governed in their action by the expressions recorded by those who entered into the discussion.

5. The Secretary presented a communication from the Wayne County Medical Society relative to the subject "State Medicine" that was listed upon a recommended list, for subjects for debate, by the state superintendent of public instructions. Upon motion of Cook-Boys, the Chairman of the Council was instructed to make contact with the superintendent of public instructions and discuss the undesirability of having this subject listed as a debatable question by uninformed individuals.

6. The Secretary presented a certificate to be given as an award to the members having the best exhibit at our scientific exhibit during the Annual Meeting. Upon motion of Boys-Le Fevre, the Secretary was instructed to secure these certificates and to award them according to the report and recommendations of the Committee on Awards.

7. A communication was presented from Wayne County advising that a certain Detroit physician, whose application for membership had been denied, threatens to mandamus the Wayne County Medical Society and thus obtain membership. Upon motion of Boys-Cook the Secretary was instructed to secure legal opinion and advice. Upon the receipt of this information, all county societies were to be advised as to the proper procedure when such threats are made.

8. Upon motion of Boys-Cook, the Secretary was instructed to visit Pontiac, make a survey of local conditions, ascertain the desire of the local doctors as to features for the annual program and to report his findings at the next meeting of the Council.

9. Communication having been received by President Stone from the Michigan Tuberculosis Association to appoint a member to represent the State Society upon the medical advisory committee of that association, President Stone appointed Dr. Wm. A. Hudson of Detroit. Which appointment was approved by the Executive Committee.

10. Dr. Bruce discussed at length the contemplated programs for post graduate conferences during the coming year, which programs were approved and Dr. Bruce and the Secretary were instructed to proceed with the completion of the necessary arrangements.

11. Upon motion of Boys-Le Fevre, the Secretary was instructed to arrange for a conference, between the Executive Committee and the officers of the Scientific Sections of our state society, some time during the early part of the year for the purpose of outlining the section programs for our next annual meeting. The Secretary was further instructed to notify the section officers that definite or final arrangements for their respective programs should not be made until after this conference.

The Executive Committee adjourned at 11:15 P. M.

F. C. WARNSHUIS,
Secretary.

CONSTITUTION AND BY-LAWS OF THE MICHIGAN STATE MEDICAL SOCIETY*

CONSTITUTION

ARTICLE 1—NAME

Section 1. The name of this organization shall be the Michigan State Medical Society.

ARTICLE 2—PURPOSE

Section 1. The purposes of this Society are to promote the science and art of medicine, the protection of public health and the betterment of the Medical Profession; and to unite with similar organizations in other States and Territories of the United States to form the American Medical Association.

Section 2. This Society as a State unit of the American Medical Association, and as the State expression of the component county societies of Michigan, shall have three major divisions:

1. The Society as a whole, as when it meets in general session.
2. The Scientific Assembly and its subordinate or related bodies.
3. The House of Delegates and its subordinate or related body.

Section 3. The terms "county medical society" and "component county medical society" shall be deemed to include all county medical societies now in affiliation with this Society or which may be hereafter organized and chartered by the Council.

Section 4. Only one component county society shall be chartered in any one county of the State; Provided, however, when in the judgment of the House of Delegates or of the Council it is deemed to be to the best interest of this Society, a charter may be granted to a component society comprising two or more counties.

ARTICLE 3—MEMBERS

Section 1. This Society shall consist of members, honorary members and associate members who shall be the members of component county medical societies who have been certified to the Secretary of this Society and whose current dues have been paid.

Section 2. Qualifications.—Active members shall comprise all the active members of a component county society. No person shall be eligible for election to active membership in a component county society unless

he shall hold the degree of Doctor of Medicine, issued to him by an institution of learning accredited by the American Medical Association, at the time of conferring such degree. He must also hold an unrevoked license to practice medicine and surgery in the State of Michigan. Members now* in good standing of any component society are hereby exempted from the educational provisions of this section.

Section 3. Honorary Members.—The House of Delegates on recommendation of a county society may elect as an Honorary Member any persons distinguished for their services or attainments as doctors of medicine, or in the field of public health, or research, or other scientific work contributing to medicine. Honorary members shall not pay dues and shall not have the right to vote or hold office.

Section 4. Associate Members.—County Societies may elect as Associate Members any persons distinguished for their services in the allied sciences or in the field of public health, and upon recommendation of a county society, the House of Delegates may elect such nominees as Associate Members of this State Society. They shall not pay dues in the State Society nor shall they have the right to vote or to hold office. County Societies shall charge them all or a proportion of their local dues out of which the Journal subscription is to be paid to the State Society and these Associate Members shall receive the Journal.

Section 5. Retired Members.—Members who have maintained their membership in a component county society of the State Society for a period of ten or more years, and who are certified by their county society as having retired from practice, may be transferred to the retired members' roster. They shall be entitled to receive the publications of the Society at such rates as the Council may from time to time determine. They shall not have the right to vote or to hold office.

ARTICLE 4—HOUSE OF DELEGATES

Section 1. The House of Delegates shall be the legislative body of the Society, and shall consist of Delegates elected by component county societies, and the Officers of the State Society.

Section 2. Composition.—The House of Delegates shall be composed of delegates

*Adopted September, 1930.

*September, 1930.

ected by the component county societies. Each county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members and one delegate for each additional major fraction thereof. Any county society which holds a charter from this Society and has less than fifty members shall be entitled to send one delegate if its annual report has been properly filed with the Secretary.

Section 3. The officers of this Society and the members of the Council shall be ex-officio members of the House of Delegates without power to vote.

Section 4. The House of Delegates shall transact all of the business of the Society not otherwise specifically provided for, it shall adopt rules and regulations for its own government and for the administration of the affairs of the Society; it shall provide for the organization of Councilor Districts, and, it shall provide for a division of the scientific work of the Society into appropriate sections.

Section 5. Elections.—The House of Delegates shall at the regular annual session elect the President-Elect, the President, a Speaker and a Vice-Speaker of the House of Delegates and the members of the Council.

ARTICLE 5—THE COUNCIL

Section 1. The Council shall be the Executive Body of the Society. The Council shall have the full authority and power of the House of Delegates between annual sessions, unless the House of Delegates shall be called into special session as provided for in the By-Laws. It shall consist of the Councilors, the President, the President-Elect, the Secretary and the Treasurer of the Society. Eight of its members shall constitute a quorum. The President, the President-Elect, the Secretary and the Treasurer shall be ex-officio members and without the right to vote.

ARTICLE 6—SCIENTIFIC ASSEMBLY

Section 1. The House of Delegates shall provide for a division of the scientific work of the Society into appropriate sections and for the organization of such Councilor District Societies as will promote the best interest of the profession.

Section 2. The Scientific Assembly of the Society is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of

medicine, its allied specialties and the problems of public health conservation.

Section 3. The Scientific Assembly is divided into sections, each section representing that branch of medicine described in its title.

Section 4. New sections may be created or existing sections discontinued by the House of Delegates. The Scientific Assembly and its component sections shall be conducted in accordance with the provisions of the Constitution and By-Laws.

Section 5. The program for the Scientific Assembly shall be arranged by the committee on scientific work, composed of the officers of the several sections. They shall submit their programs for approval to the Executive Committee of the Council.

ARTICLE 7—SESSIONS AND MEETINGS

Section 1. The Society shall hold an annual meeting at such time and place and of such duration as the House of Delegates and the Council may determine. This power may be delegated to the Council. And County societies desiring the Annual Meeting shall file their application with the Council sixty days prior to an Annual session. The session shall be open to all members, delegates, and invited guests, who are in good standing in the Society.

Section 2. Special meetings of the Society shall be called for general session on the petition of the Council, or by a petition signed by two hundred and fifty members, or upon petition of forty delegates registered at the previous regular session. The call for regular and special sessions shall be issued by the President and Secretary, complying with these provisions, and shall go forth not later than thirty days before the proposed date of holding a regular or special session.

Section 3. Special meetings of the House of Delegates shall be called by the Council, on a petition signed by thirty delegates who served at the last regular session of the House. It is distinctly provided that in petitioning for a special session of the House of Delegates not more than fifteen petitioners shall come from one county society.

ARTICLE 8—OFFICERS

Section 1. The general officers of this Society shall be a President, a President-Elect, a Treasurer, a Secretary, an Editor, a Speaker and Vice-Speaker of the House

of Delegates, and a Board of Councilors of such number as the House of Delegates may fix from time to time.

Section 2. The President, the President-Elect, the Councilors, the Speaker and the Vice-Speaker shall be elected annually by the House of Delegates. The Secretary, the Editor, and the Treasurer shall be elected by the Council at its annual meeting in January of each year. The Councilors shall be elected for a term of five years each. These terms to be so divided so that no more than four Councilors are elected at any annual session. All these officers shall serve until their successors are elected and installed.

ARTICLE 9—FUNDS AND EXPENSES

Section 1. The annual membership dues shall be fixed by the House of Delegates.

Section 2. The funds of the Society shall only be disbursed by order or action of the Council.

Section 3. The invested funds of the Society shall be delivered to the Treasurer by the Secretary.

Section 4. The Secretary shall collect all annual dues and all monies owing to the Society, depositing them in an approved depository and disbursed by him upon order of the Council. The Council shall cause an annual audit to be made of the funds of the Society by certified public accountants, and shall require the Treasurer and the Secretary to be bonded for an adequate amount.

ARTICLE 10—REFERENDUM

Section 1. At any general meeting of the Society it may by a two-thirds vote order a general referendum upon any question pending before the House of Delegates. The House of Delegates may, by a vote of its members, submit any question to the membership of the Society for its vote. A majority of all the members present at that session shall determine the question and be binding.

ARTICLE 11—SEAL

Section 1. The Society shall have a common seal. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE 12—AMENDMENTS

Section 1. The House of Delegates may amend any article of this constitution by a two-thirds vote of the Delegates present at any annual session, provided that such

amendment shall have been presented in open meeting at the previous annual session, and that it shall have been published at least once during the year in the Journal of the Society, or sent officially to each component society at least two months before the meeting at which final action is to be taken.

Section 2. This constitution shall become effective immediately upon its adoption.

BY-LAWS

CHAPTER 1—MEMBERSHIP

Section 1. The charter of each component County Society shall provide that all the provisions of the Constitution and By-Laws of this Society, together with all amendments to either thereof hereafter adopted, insofar as the same are applicable, shall be an integral part of the Constitution and By-Laws of the component County Society to which a charter is issued, and that the terms and provisions thereof shall control and govern such component county society, the officers and members thereof, and that the Constitution and By-Laws of the component county society shall not be amended in any way to conflict or be inconsistent with the Constitution and By-Laws of this Society.

Section 2. The charter of any component county society may be revoked by the House of Delegates if, after filing with the Secretary of this Society a written petition signed by the Chairman of the Council pursuant to a resolution adopted by the Council with the affirmative vote of two-thirds of all the members thereof, and, after due notice of hearing and after hearing, thereof, the House of Delegates by a two-thirds vote of its members decides that the provisions of the Constitution and By-Laws of this Society have been breached, or that such County Society has committed acts or conducted itself in conflict with the Constitution and By-Laws or provisions of this Society to such an extent as to make such revocation desirable in the best interests of this Society.

Section 3. All members of the component county societies who are not in arrears for dues shall be privileged to attend all meetings and take part in all the proceedings and shall be eligible to any office within the gift of the Society except as otherwise provided.

Any member in arrears for dues for the amount of one year or more may regain

membership either by paying up all back dues or by being again elected to membership, at the option of the county society.

Section 4. Inasmuch as the county society is the only door of admission to this State Society and to the American Medical Association, the county society shall be the judge of the qualifications of an individual for election and continuance of membership, subject, however, to the right of appeal to the Council from the action recorded by the County Society.

Section 5. No member who is under sentence of suspension or expulsion from any component society of this Society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Society.

CHAPTER 2—GENERAL MEETINGS

Section 1. During each Annual Session the Society shall hold one or more general meetings. The number and time of these general meetings are to be determined by the Council with or without the recommendation of the House of Delegates. Each general meeting shall be presided over by the President or in his absence by the President-Elect or the Chairman of the Council.

Section 2. The following shall be the order of business of the first general meeting:

1. Call to Order.
2. Address of Welcome.
3. Announcements and Reports of the House of Delegates.
4. President's Annual Address.
5. Special Addresses.
6. Resolutions and Motions.
7. Introduction of President-Elect.

Section 3. All the registered members at an Annual Session shall have an equal right to participate in the deliberations of an Annual Session and to vote on pending questions.

Section 4. The general meeting or any of the sections may recommend to the House of Delegates or to the Council the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and the public. No action taken at the general meeting shall be in conflict with the provisions of the Constitution and By-Laws.

CHAPTER 3—HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet annually at the time and place of the

Annual Session and may hold such number of sessions as the House may determine and its business require, adjourning from day to day as may be necessary to complete its business and specifying its own time for the holding of its sessions.

Section 2. A Delegate must have been a member of the Society for at least two years preceding his election.

Section 3. A Delegate once seated shall remain a delegate through the entire session and his place shall not be taken by any other delegate or alternate, provided that in case of emergency the House of Delegates may seat a duly accredited alternate from his county society.

Section 4. The officers of county societies shall certify to the State Secretary the names of the delegates and alternates who shall represent them at the Annual Meeting.

Section 5. A quorum of the House of Delegates shall be constituted from 40 per cent of the accredited delegates, providing that a majority of such quorum shall not come from any one county society.

Section 6. The officers of the House of Delegates shall be a Speaker and Vice-Speaker. The Secretary of the State Society, elected by the Council, shall be the Secretary of the House of Delegates.

Section 7. (a) The House of Delegates is the legislative body of the Society, and shall have authority to adopt and institute such methods and measures as it may deem most efficient for the up-building and establishing of the interests of the profession in Michigan.

(b) It shall concern itself and advise as to the interests of the profession and of the public in those matters of legislation pertaining to medical education, medical registration, medical laws and public health.

(c) It shall be active in the education of the public in regard to medical research and scientific medicine.

(d) It shall elect delegates and alternate delegates to the American Medical Association in accordance with the regulations of that parent association.

(e) It shall divide the State into Councilor districts and direct the formation of district societies.

(f) It shall have the authority to appoint committees, standing or special, from among its members or the members of the Society. Such committees are to report to the House

of Delegates and their members may participate in the debate upon their committees' report.

(g) It shall approve all memorials and resolutions in the name of the Society before the same shall become effective. Provided, that in the interim, in the presence of necessity for prompt action the Council is empowered to act in behalf of the Society.

(h) It shall elect the Councilors upon the nomination of the delegates of a Councilor District whose Councilor's term expires.

(i) The House of Delegates shall provide for the division of the scientific work of the Society into appropriate sections. It shall prescribe the rules governing the meetings of these sections and the election of officers.

(j) It shall present a summary of its proceedings at a General Meeting of the Society and publish its minutes in The Journal.

(k) It shall have the following standing and business committees, appointed by the Speaker:

Committees on—

Council Reports

Officers' Reports

Reports of Standing Committees of the Society

Miscellaneous Business

Special Committees.

(l) No new business shall be introduced in the last session of the House of Delegates without unanimous consent of the delegates except when presented by the Council. All new business so presented shall require three-fourths affirmative vote for adoption.

(m) The election of the officers of the Society by the House of Delegates shall be held at the last session of the House of Delegates at any Annual Meeting. No delegate shall be eligible for election to the general offices of the society hereby defined as President, President-Elect, Editor, Secretary and Treasurer, but may be eligible for election as Speaker or Vice-Speaker of the House. Nominations for any office in the Society shall be made on the floor of the House and shall be limited to two minutes. When the Speaker has declared the nomination for any office closed he shall designate a committee of tellers who shall distribute, count and announce the result of the ballot. In the event of only one nominee the candidate may be elected by a viva voce vote. Members elected to office shall take office at the close of the last session of the Annual Meeting.

(n) All resolutions introduced into the House shall be in duplicate and presented to the Secretary immediately after the delegate has read the same and shall be referred to the proper committee by the Speaker before action thereon is taken.

(o) Robert's Rules of Order when not in conflict with this Constitution and By-Laws shall govern the parliamentary proceedings of the House of Delegates.

CHAPTER 4—DUTIES OF OFFICERS

Section 1. The President shall preside at all General Meetings of the Society, and shall fill all vacancies in offices and committees in consultation with the Council unless otherwise provided for; he shall appoint the members of all committees not otherwise provided for; he shall deliver the President's address and shall as far as practicable visit component county societies during his tenure of office; he shall have a voice in the deliberations of the House of Delegates and he shall be an ex-officio member of the Council.

Section 2. The President-Elect shall be a member of the Council ex-officio, and shall act for the President in his absence or disability. If the office of President shall become vacant the President-Elect shall succeed to the Presidency. If the office of President shall again become vacant the Council shall elect a President for the unexpired term.

Section 3. The Treasurer shall be the custodian of all the invested funds and the securities of the Society. He shall be elected by the Council and accountable through the Council to the Society. The Council shall cause an annual audit to be made of his accounts.

Section 4. The Secretary shall be the custodian of all the records of the Society, he shall conduct all the official correspondence of the Society at the direction of the House of Delegates, the Council and the officers of the Society. He shall be the Recording Officer of the House of Delegates, the Council, Scientific Assembly and General Meeting and shall be an ex-officio member of these bodies. He shall also discharge the following duties:

1. Collect the annual membership dues and such other monies as may be due to the Society, keep membership records and issue membership certificates.

2. He shall conduct the correspondence of the Society.
3. He shall make all required reports to the American Medical Association.
4. He shall act as one of the delegates of the Society to the American Medical Association.
5. He shall deposit all funds received in an approved depository and disburse them upon the order of the Council. The Council shall cause an annual audit of his accounts by a certified public accountant. He shall render an annual report to the Council reviewing the Society's activities and imparting recommendations for the advancement of the Society's interest.
6. He shall perform such other duties as the Council may direct. Under the direction of the Council he shall be the Business Manager of the Journal, performing all duties concerned with the issuance of that publication.
7. He shall superintend all arrangements for the holding of all meetings in compliance with the Constitution and By-Laws and the instructions of the Council.
8. He shall send out all official notices of meetings, committee appointments, certificates of election to office and special duties of committees.
9. He shall receive and transmit to the House of Delegates and to the Council all committee and officers' annual reports.
10. He shall be elected by the Council and shall be remunerated by a salary, the amount of which shall be fixed by the Council, and approved by the House of Delegates.
11. He shall perform all such other secretarial duties that the interests of the Society demand.

CHAPTER 5—THE COUNCIL

Section 1. The Council is the Executive body of the Society. It shall determine its own time and place of meeting. It shall elect its own Chairman and Vice-Chairman to serve one year. Its annual meeting shall be held coincident with the annual meeting of the Society. It shall appoint an executive body of five of its members who shall meet monthly with the President and the Secretary and such other officers as the business interests of the Society demand.

Section 2. Each Councilor shall be the organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year and keep in touch with the activities of the societies constituting his district. He shall make an annual report to the Council imparting the condition of the profession in his district.

Section 3. Collectively the Council shall be the Board of Censors of the Society. It shall consider all questions involving the right and standing of members whether in relation to other members, to component societies, or to this Society. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all cases, including questions regarding membership in this Society, shall be final.

Section 4. It shall make careful inquiry into the condition of the profession in each county in the state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians in the same locality and shall continue these efforts until every reputable physician of the state has been brought under the Society's influence.

Section 5. It shall upon application provide and issue charters to county societies organized in conformity with this Constitution and By-Laws and revoke such charters when deemed necessary.

Section 6. The Council shall direct and control the publication of the Journal and shall elect the Editor of the Journal.

Section 7. The Council shall approve the expenditure of all the funds of the Society before the same are disbursed.

Section 8. The Council shall appoint the members of the Medico-Legal Committee and supervise the duties and work of that committee.

Section 9. The Council shall provide such headquarters for the Society as may be required to conduct its business properly.

Section 10. The Council shall render an Annual Report to the House of Delegates.

CHAPTER 6—STANDING COMMITTEES

Section 1. The following standing committees shall be appointed by the President by and with the advice of the Council:

- (a) Committee on Legislation.
- (b) Committee on Civic and Industrial Relations.
- (c) Joint Committee on Public Health Education.

Section 2. The Committee on Legislation shall consist of five members appointed by the President each year and with the approval of the Council.

The Committee on Legislation shall utilize every organized influence of the profession for the promoting of such legislation as will be for the best interests of the public's health and that of scientific medicine. It shall work under the direction of the House of Delegates or of the Council when the House of Delegates is not in session. No bill or proposed law or amendment shall be introduced in the state legislature or sent to any member of the legislature in the name of this Society or by any of its committees until such proposed legislation shall have been endorsed and approved by the Council.

It shall submit an annual report with recommendations to the House of Delegates.

Section 3. The Committee on Civic and Industrial Relations shall consist of seven members appointed by the President by and with the advice of the Council.

The duty of this committee is to represent the profession in all conferences that may be held within the boundaries of this state dealing with problems pertaining to civic and industrial medicine and the relation of the profession thereto.

The committee shall undertake in addition to the above activities the study of our civic and industrial problems and concern itself with the profession's interest and endeavor to enhance the relation of the profession to civic and industrial bodies.

Section 4. The Medico-Legal Committee shall consist of an executive board of five to be elected by the Council. Each component society shall elect one representative who shall act for the committee in their respective counties. The Council at its January meeting shall elect one of the five members of the executive board as Chairman whose term shall be for one year.

The salary of the Chairman of the Medico-Legal Committee shall be fixed by the Council annually. The executive board of the Medico-Legal Committee shall report to the Council at its annual meeting, giving full particulars of the work of the committee and a detailed statement of income and disbursements.

The funds allotted to the Medico-Legal Committee shall be deposited by the Secretary of the State Society in an approved depository and shall be disbursed by him upon the recommendation of the Chairman of the Medico-Legal Committee and by and with the approval of the Council.

The Medico-Legal Committee shall engage a competent firm of general attorneys and fix their compensation. Their duty shall be to compile from all available sources court decisions fixing the law of liability of physicians for civil malpractice; such compilations shall be the property of the Society. The Medico-Legal Committee will also defend any member of the Society in good standing, when sued or threatened with suit for civil malpractice, and to supervise such defense through proper attorneys. Members in arrears after April first of each year shall not be entitled to defense for any suit, the cause of action which arose while in arrears, and any member sued or threatened before joining the Society shall not be entitled to the services of the Medico-Legal Committee.

Members against whom action is brought in court without the boundary of Michigan shall not be entitled to medical legal defense unless the circumstances in each particular case justify the making of such defense and then only after the approval of the Council has been secured.

With the exceptions noted above, the Medico-Legal Committee shall undertake the defense of any member of the Society sued or threatened with suit for civil malpractice through all State and Federal courts operating in Michigan, regardless of the time when the alleged cause for action arose and shall also defend any action for civil malpractice against the estate of a deceased member, providing he or she while living conformed to the foregoing requirements.

In the event that during any one year the demands upon the Medico-Legal fund be large enough to exhaust it, the Council shall be authorized to loan sufficient funds of the Society to meet the contingency.

It shall be the duty of any member of the

Society threatened with action for civil malpractice to confer at once with the member of the Medico-Legal Committee from his county society and with his aid prepare the case and forward the same to the Chairman of the Medico-Legal Committee. He must agree not to settle or compromise his case without the consent of the Executive Board and the general attorney. He may recommend the best available local attorney, but he shall not engage the services of any local attorney unless directed by the Chairman of the board and the general attorneys of the committee.

All attorney fees and court costs will be paid from the Medico-Legal fund and the defense carried through all Federal and State courts operating in Michigan, but under no circumstances shall this fund be liable for any damages assessed against a member.

Section 5. The President shall appoint five members who shall constitute the Society's representatives upon the state committee known as the Joint Committee on Public Health Education. The term of one of the members of this committee shall expire each year.

CHAPTER 7—EMERGENCY

Section 1. When prompt speech and action are imperative, authority to speak and act in the name of the Society is invested in the Council.

CHAPTER 8—ANNUAL DUES

Section 1. The annual dues shall be ten dollars for each member. The Secretary of each county society shall collect and forward the dues to the State Secretary on or before April first of each year.

Section 2. Any member in arrears after April 1st of each official year shall stand suspended until his name is properly recorded and his dues for the current year properly remitted.

Section 3. Any county society which fails to make the reports required at least thirty days before the Annual Meeting of the State Society shall be held suspended and none of its members or delegates shall be permitted to participate in any of the proceedings of the Society or of the House of Delegates.

CHAPTER 9—COUNTY SOCIETIES

Section 1. All county societies now in affiliation with the State Society or those which may hereafter be originated in this

state, which have adopted principles of organization not in conflict with this Constitution and By-Laws or with the Principles of Medical Ethics of the American Medical Association, will upon application to the Council receive a charter and become a component part of this Society.

Section 2. Only one component county medical society shall be chartered in any county.

Section 3. Each county society shall be the judge of the qualifications of its own members; but, as such societies are the only portals to this Society and to the American Medical Association, every reputable and legal practitioner of medicine shall be eligible to membership. He shall continue as a member, providing he complies with the provisions of the Constitution and By-Laws of his county society and of this Society. In the event that his conduct, actions or professional labors reflect violation of said provisions, and in the event of failure on the part of his county society to exercise disciplinary action upon him, the Council after due notice and hearing may cause his expulsion.

A member of a component society whose license has been revoked shall be dropped from membership automatically as of the date of revocation.

Section 4. Any physician who may feel aggrieved with the action of his county society in suspending or expelling him from membership shall have the right to appeal to the Councilor of his district and lastly to the Council.

Section 5. In the hearing of appeals the Councilor or the Council may admit oral or written evidence as in their judgment will best and most fairly present facts. The decision of the Council is final and an appeal can only be taken to the Judicial Council of the American Medical Association upon the representation that the appellant was not accorded the opportunity of a fair and just trial.

Efforts at conciliation and compromise shall, however, precede all hearings.

Section 6. A physician living near a county line may hold his membership in that county most convenient for him to attend, on permission of the Councilor or Councilors in whose jurisdiction he resides.

Section 7. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall

be constantly exerted for bettering the scientific, the moral and material conditions of every physician in the county; systematic effort shall be made by each member and by the county society as a whole to increase the membership until it embraces every eligible physician in the county.

Section 8. At the annual meeting of each county society or at a designated meeting of which ample notice has been given, each county society shall elect annually delegates or alternate delegates in conformity with the provisions of this Constitution and By-Laws to represent the county society in the House of Delegates of this Society. The Secretary of the County Society shall immediately send a list of its delegates to the Secretary of the State Society.

Section 9. The Secretary of each county society shall keep a roster of its members, and if practicable a list of nonaffiliated physicians in the county, in which shall be shown the full name, the address, the college and date of graduation, the date of license to practice in this state, and such other information as may be deemed necessary.

Section 10. Each county society shall appoint or elect a committee on Legislation and Public Policy, and the County Secretary shall send the name and address of the Chairman to the Secretary of this Society.

CHAPTER 10—AMENDMENTS

Section 1. These By-Laws may be amended by a majority vote of the delegates present, after the proposed amendment is laid on the table for one session. These By-Laws become effective immediately upon adoption.

MINUTES OF THE JOINT CONFERENCE OF THE EXECUTIVE COMMITTEE OF THE COUNCIL OF THE MICHIGAN STATE MEDICAL SOCIETY AND THE OFFICERS AND LEGISLATIVE COMMITTEE OF THE WAYNE COUNTY MEDICAL SOCIETY

This Conference was called to order by Chairman Corbus of the Council of the Michigan State Medical Society, in the headquarters of the Wayne County Medical Society at 5:00 P. M. November 10, 1930.

Doctor Corbus made a general statement as to the purpose and objects of this conference. He in turn was followed in the dis-

cussion by Dr. J. M. Robb, President of the Wayne County Medical Society, Dr. Charles Kennedy, Chairman of the Legislative Committee of the Wayne County Medical Society, President Stone of the State Medical Society, Dr. Nelson McLaughlin, President of the State Board of Registration in Medicine, Dr. Frank Kelly and several others.

The discussion reviewed the problems that confronted us and indicated the program that should govern our legislative policy during the coming year.

Upon adjournment at 8:00 P. M. it was the consensus of opinion of all those present that the Legislative Committee of the State Society and the Executive Committee of the Council should be governed by the opinions and recommendations expressed. In adjourning the meeting, Dr. Corbus stated that the Legislative Committee and the Executive Committee would be so guided and they would transmit to all the component medical societies the policies that shall govern our legislative activities.

There being no further business the conference adjourned.

F. C. WARNSHUIS,
Secretary.

MICHIGAN STATE BOARD OF REGISTRATION IN MEDICINE

Regular semi-annual meeting held at Hotel Olds, Lansing, October 15, 1930.

Present: Dr. Nelson McLaughlin, Wm. H. Marshall, Frank A. Kelly, J. D. Brook, J. Earl McIntyre, W. Ellwood Tew, Charles A. Tiefer, Wm. F. English, T. G. Yeomans, and Dr. F. C. Warnshuis, Secretary.

Absent: Dr. W. A. Lemire.

Dr. Nelson McLaughlin, President, in the Chair. The meeting was called to order by the President.

The minutes of the last meeting were read by the Secretary. No objection being raised, the Chairman declared the minutes of the meeting held in Ann Arbor, June 11, 1930, adopted as read.

REPORT OF THE REGISTRATION AND STANDARD COMMITTEE

Dr. J. D. Brook, Chairman.

Dr. F. A. Kelly.

Dr. W. H. Marshall.

Dr. W. Ellwood Tew.

Dr. T. G. Yeomans.

Re: *Dr. Sidney H. Culver, Mason, Michigan.*

Graduate: University of Michigan, 1886.

Licensed upon credentials, January 26, 1900. Practiced in Mason, Michigan, since that time.

Dr. Culver was convicted upon the charge of abortion, May 29, 1930, in the Circuit Court, Mason, Michigan, and a sentence of \$500.00 or six months in jail, was imposed, with the recommendation by the trial judge that his medical license be revoked.

On June 2, 1930, a notice was served upon Dr. Culver requiring him to appear before the Board at the meeting at Ann Arbor, June 11, 1930, but at his request action was postponed until the October 15 meeting.

The provisions of Act 237, P. A. of 1899 as amended, having been complied with and Dr. Culver having been notified by registered mail to appear before the Board of Registration in Medicine to show cause why his license should not be revoked, the Board proceeded with an open hearing and after due review of the evidence presented and careful deliberation, took such action as is hereby indicated:

Cited to appear: June 2, 1930, and September 8, 1930.

Charge.—Certified copy of his conviction upon the charge of abortion in the Circuit Court of Ingham County, Mason, Michigan, May 29, 1930. Accused appeared in person, and in company with Dr. Yerkes and Dr. McNamara, and was given ample opportunity to present to the Board such statements, evidence and witnesses as he desired.

Action.—Upon termination of the open hearing, the Board went into executive session. After careful weighing and reviewing the evidence presented, the finding of the Board of Registration in Medicine was that Dr. Culver was guilty of violating the provisions of the Medical Practice Act upon his conviction of the charge of abortion.

Thereupon, on motion of Dr. McIntyre, seconded by Dr. Tew, license No. 476, issued to Dr. Sidney H. Culver under date of January 26, 1900, was revoked, effective immediately, and the Secretary was instructed to so notify Dr. Culver.

Yes, 9; no, 0. Motion carried.

Re: Dr. John L. Estabrook, 2539 W. Grand Blvd., Detroit, Michigan.

Graduate: Michigan College of Medicine and Surgery, 1907. Licensed in Michigan, September 30, 1905.

Dr. Estabrook was convicted in Recorder's Court, Detroit, Michigan, on October 3, 1930, of obtaining money under false pretenses, from his patients, and sentenced to serve from five to ten years in the Michigan State Prison at Marquette. Dr. Estabrook pleaded guilty to the charge of obtaining \$800 from Mrs. Helen Rogge, 15775 Biltmore Avenue, Detroit, as the specific charge, although he had obtained approximately \$15,000 according to the complaints received by the prosecuting attorney's office. In sentencing him, Judge Boyne said: "I see no reason why I should not give you a severe sentence for this crime. You are worse than a holdup man, because these people had confidence in you and you took advantage of them."

The Committee recommends that Dr. Estabrook's license be revoked.

A registered notice was sent to his residence, 2539 West Grand Boulevard, Detroit, on September 24, 1930, but delivery was refused and the postoffice department returned it to the Secretary. An attempt was made to serve him in the Wayne County Jail but he had left for Marquette Prison, therefore a registered notice was sent to him at that place, but the return card was not received.

The provisions of Act 237, P. A. of 1899, having been complied with, and a proper notice served upon Dr. Estabrook, the Board proceeded with an open hearing, and after due review of the evidence presented and careful deliberation, took such action as is hereby indicated:

Cited to appear: September 24, 1930. Second notice sent to Marquette, October 4, 1930.

Charge.—Certified copy of Dr. Estabrook's conviction and sentence upon the charge of obtaining money under false pretenses, in Recorder's Court of the City of Detroit, September 25 and October 3, 1930, respectively, submitted to the Board.

Accused did not appear, either in person or by representation.

Action.—Upon termination of the open hearing, the Board went into executive session. After care-

ful weighing and reviewing the evidence presented, the finding of the Board of Registration in Medicine was that Dr. Estabrook had been guilty of a violation of the Medical Practice Act, on his conviction upon the charge of obtaining money under false pretenses.

Thereupon, on motion of Dr. Brook, seconded by Dr. McIntyre, license 6009, issued September 30, 1905, to Dr. John L. Estabrook, was revoked, effective immediately, and the Secretary instructed to so notify Dr. Estabrook.

Yes, 9; no, 0. Motion carried.

Re: Dr. George W. Leuschner, 731 24th Street, Detroit, Michigan.

Graduate: Michigan College of Medicine and Surgery, 1892. Licensed in Michigan, January 26, 1900.

An affidavit is made by Mrs. Lena Phaff, of Pigeon, Michigan, stating that Dr. Leuschner has associated himself with an unregistered practitioner of medicine, namely one George R. Denis, who conducts a sanitarium (so-called) at 731 24th Street, Detroit, under the protection of Dr. Leuschner's medical license.

A registered notice was sent to Dr. Leuschner at this address, but it was refused and the notice returned to the Secretary's office.

The Committee makes no recommendation.

The Board then proceeded with an open hearing and after due review of the evidence presented, and careful deliberation, took such action as is hereby indicated:

Cited to appear: October 6, 1930.

Charge.—A sworn affidavit submitted stating that Dr. Leuschner was associating with an unregistered practitioner of medicine, and loaning his name to said unregistered practitioner of medicine for the purpose of obtaining patients, that he has been guilty of grossly unprofessional and dishonest conduct, and has violated the provisions of the Medical Practice Act.

Action.—Upon termination of the open hearing, the Board went into executive session.

Dr. Leuschner did not appear.

After careful weighing and reviewing the facts presented, the finding of the Board of Registration in Medicine was that Dr. Leuschner had been guilty of violating the provisions of the Medical Practice Act, under which he was registered.

Thereupon, on motion of Dr. McIntyre, seconded by Dr. Tiefer, License No. 1203, issued January 26, 1900, to Dr. George W. Leuschner, was revoked, effective immediately, and the Secretary was instructed to so notify Dr. Leuschner.

Yes, 9; no, 0. Motion carried.

Re: Dr. George Washington Bolkcom, Boston Block, Minneapolis, Minnesota.

Age: 63 years. Graduate: University of Minnesota, 1894; licensed in Minnesota, January 9, 1900; licensed in Michigan through indorsement, March 28, 1912. Dr. Bolkcom maintains his residence in Minneapolis, Minnesota, making periodical visits throughout the state of Michigan, advertising in the local newspapers to obtain patients, stating he will make free examinations and promising to cure all diseases without the aid of the knife. He formerly called himself the "Progressive Medical Doctor."

Complaints have been received over a period of years regarding his advertising.

Dr. Bolkcom was notified under date of October 6, 1930, to appear at the Board meeting October 15 and show cause why his Michigan license should not be revoked.

The Committee makes no recommendation.

The Board then proceeded with an open hearing and after due review of the evidence presented and careful deliberation took such action as is hereby indicated:

Cited to appear: October 6, 1930.

Charge.—Newspaper advertisements were presented to the Board in which Dr. Bolkcom advertises himself as a "Specialist in Internal Medicine," treating all diseases without surgery, and offering "Free consultation."

Dr. Bolkcom did not appear, but a letter was presented from his attorney, Mark J. Woolley, Minneapolis, Minnesota, asking a delay in the hearing as Dr. Bolkcom had "routed himself in the State of Michigan for a two-week period, starting on the thirteenth of October and ending on the 25th, and at considerable expense to himself."

Action.—Upon termination of the open hearing, the Board went into executive session. After careful weighing and reviewing the evidence presented, the finding of the Board of Registration in Medicine was that Dr. Bolkcom had been guilty of grossly unprofessional and dishonest conduct, and violating the provisions of the Medical Practice Act.

Thereupon, on motion of Dr. McIntyre, seconded by Dr. Tiefer, License No. 7335, issued March 28, 1912, to Dr. George Washington Bolkcom, was revoked, effective immediately, and the Secretary was instructed to so notify Dr. Bolkcom.

Yes, 9; no, 0. Motion carried.

Re: Dr. Walter E. McGillicuddy, Kresge Bldg., Detroit.

Dr. McGillicuddy's application for examination states that he attended the Detroit College of Medicine for four years, September, 1909, to May, 1913, but that at the end of that period the school informed him that due to a condition in his first year he would not receive credit for any of his medical work. He claimed unfair treatment and the Board admitted him to examination, June, 1926, which he passed with an average of 84.6½ per cent and was granted Michigan certificate of registration No. 10828, July 17, 1927.

Dr. MacCraken, Dean of the Detroit College of Medicine and Surgery, takes exception to his statements and claims they are untrue. He states Dr. McGillicuddy was a regular student only during 1909-12, and a "special" student in 1914-15, devoting his time to Anatomy, and receiving a condition in that subject at the end of that period. He gives a résumé of Dr. McGillicuddy's courses.

Dr. McGillicuddy appeared in person.

The Committee recommends further investigation by the Board.

By Dr. Brook, seconded by Dr. Tiefer:

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 9; No, 0. Motion carried.

Re: Dr. Louis L. Kelly, Okemos, Michigan.

Graduate: University of Michigan Medical School in 1875. Licensed in Michigan, upon credentials, March 22, 1900.

A complaint was filed by Mr. L. A. Potter, Special Investigator for the Michigan Department of Health, regarding a case investigated by Sergeant Tubbs, of the State Police Department, involving two boys injured in a motorcycle and automobile accident—one of the boys dying, and both of them losing limbs. The complaint was that improper care had been given the injured persons, thereby causing one's death.

Another complaint was filed by Mr. Potter, involving medical care accorded Mrs. Hilda Coe, of Okemos. Statements in this case submitted by Dr. D. A. Galbraith, and Dr. Milton Shaw.

Dr. Kelly appeared in person, as did also Sergeant Tubbs, and were accorded hearings by the Board.

The Committee makes no recommendation.

By Dr. Kelly, seconded by Dr. Marshall:

RESOLVED, that no action be taken by this Board, at this time, upon these complaints.

Yes, 9; No, 0. Motion carried.

Re: Dr. Seth M. Angle, Bennett Block, Jackson, Michigan.

Graduate: Detroit College of Medicine, 1906. Licensed in Michigan, May 17, 1906.

Complaint is filed by the Better Business Bureau, of Jackson, that Dr. Angle is advertising to cure diseases by mail, and submits a letter from Fred A. Strombeck, 2347 5th Avenue, Moline, Illinois.

The American Medical Association states that Dr. Angle has been associated with various advertising outfits, such as "The United Doctors," and a fake "consumption" cure known as "Lung Germiné." He was arrested in 1910 charged with a violation of the narcotic laws.

The Committee makes no recommendation.

Dr. Angle was represented by his attorney; did not appear in person.

By Dr. Kelly, seconded by Dr. McIntyre:

RESOLVED, that no action be taken against Dr. Angle at this time, but that the Secretary be instructed to investigate and report at a future Board meeting.

Yes, 9; no, 0. Motion carried.

Re: Dr. Charles A. Stimson, Lansing, Michigan.

Graduate: University of Michigan, 1891. Licensed in Michigan March 22, 1900.

Mr. L. A. Potter, Investigator for the Michigan Department of Health, Lansing, submits a complaint from a former patient, Mrs. Emma Ingall, of Lake Odessa, claiming mistreatment.

The Committee makes no recommendation.

Dr. Stimson appeared in person, was sworn and made a statement to the Board.

Mrs. Ingall, accompanied by her attorney, Fred Warner, was sworn by the Secretary and made a statement to the Board.

By Dr. Kelly, seconded by Dr. Yeomans:

RESOLVED, that no action be taken upon this complaint at this time.

Yes, 9; No, 0. Motion carried.

Re: Dr. Joseph H. Hanson, Detroit, Michigan.

Dr. Hanson's license was revoked by the Board, June 13, 1930, after he had promised to cure incurable diseases and collected exorbitant fees from his patients.

Mr. Kenneth M. Stevens, Detroit, attorney, appeared with a petition asking that Dr. Hanson's license be reinstated in good standing.

The Committee makes no recommendation.

By Dr. Brook, seconded by Dr. McIntyre:

RESOLVED, that the request be denied.

Yes, 9; No, 0. Motion carried.

Re: Dr. Neil E. Campbell, Narcotic Farm, Capac, Michigan.

Certified copy of Dr. Campbell's conviction upon a narcotic charge was submitted at the Board meeting, June, 1930. Consideration of the case was postponed pending a report from the Narcotic Educational Association.

Dr. Campbell appeared in person, accompanied by Mr. Waite of the Narcotic Educational Association, and were given a hearing by the Board.

The Committee recommends that Dr. Campbell's license remain in good standing, with the understanding that he remain on probation to the Narcotic Association.

By Dr. English, seconded by Dr. McIntyre.

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 9; No, 0. Motion carried.

Re: Dr. John J. George, 1153 W. Warren Avenue, Detroit.

Dr. George's license was revoked by the Special Committee, August 13, 1930, due to his connection with the "Michigan Research Clinic," a fake cancer

cure, using the Tilton method of treatment, and located in the Hotel Fort Wayne, Detroit.

The Committee makes no recommendation.

Dr. George appeared in person and submitted a letter from the investigator, Mr. Otto Fischel, retracting some of his previous statements regarding the practice of Dr. George, and asking that leniency be shown by the Board.

By Dr. Kelly, seconded by Dr. English:

RESOLVED, that the action of the Special Committee be rescinded and that Dr. George's license be continued in effect by this Board, with the provision that he be put on probation to a specified Board member, reporting every thirty days, for two years.

Yes, 8; No, 1. Motion carried.

The President appointed Dr. Kelly as probation officer.

Re: Dr. Ray E. Dean, Centreville, Michigan.

Convicted in the Circuit Court of the County of St. Joseph, village of Centreville, July 9, 1930, upon the charge of gross indecency. He was cited to appear before the Board, June 11, 1930, but action was delayed due to an appeal having been taken to his conviction.

A Writ of Error has been issued by the Supreme Court, with the date of hearing set as October 17, 1930, and Dr. Dean requests that action again be postponed in this case.

The Committee recommends that no action be taken at this time.

By Dr. McIntyre, seconded by Dr. Brook:

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 9; No, 0. Motion carried.

Re: Dr. George A. Fritch, Michigan State Prison, Marquette.

By Dr. Kelly, seconded by Dr. Marshall:

RESOLVED, that the action of the Committee on August 13, 1930, be rescinded.

Yes, 8; No, 0. Motion carried.

Charge.—Convicted in Recorder's Court, Detroit, October 28, 1919, upon the charge of manslaughter and sentenced to the State Prison at Marquette, for a term of not less than one year nor more than fifteen years, with the recommended sentence of fifteen years.

Action.—Dr. Fritch did not appear.

Upon termination of the open hearing, the Board went into executive session. After careful review of the evidence and due deliberation, the motion was made by Dr. Kelly and seconded by Dr. McIntyre that License No. 4849, issued to Dr. George A. Fritch May 31, 1902, be revoked.

Yes, 8; No, 0. Motion carried.

Re: Dr. G. W. Hilton, Grand Rapids, Michigan.

By Dr. Kelly, seconded by Dr. McIntyre:

RESOLVED, that the action of the Committee on August 13, 1930, be rescinded.

Yes, 8; No, 0. Motion carried.

Charge.—Evidence was presented charging and evidencing a violation of Section 6 of Article 3 of Act 237, in that he promised to cure incurable diseases and was guilty of grossly unprofessional and unethical conduct in his care of patients.

Dr. Hilton did not appear.

Action.—Upon termination of the open hearing, the Board went into executive session. After careful weighing and reviewing the evidence presented, the finding of the Board was that Dr. Hilton was guilty of grossly unprofessional and dishonest conduct and violating the various provisions of Act 237, Public Acts of 1899 as amended, under which he was licensed.

Thereupon, on motion of Dr. Brook, seconded by Dr. McIntyre: Certificate No. 5269, issued June 4, 1903, to Dr. G. W. Hilton, was revoked.

Yes, 8; No, 0. Motion carried.

Re: Dr. Alex H. Pearson, Ann Arbor, Michigan.

Consideration of the complaint by the Washtenaw County Medical Society that Dr. Pearson had associated with an unregistered practitioner of medicine, was postponed to the October meeting.

The Committee recommends that this matter be tabled for further investigation and report.

By Dr. McIntyre, seconded by Dr. Tew:

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 8; No, 0. Motion carried.

Re: Dr. A. James DeNike, 8839 Mt. Elliott Avenue, Detroit.

Graduate: Grand Rapids Medical College, 1903.

A sworn affidavit is submitted by Charles DeLeir, 5916 Helen Avenue, Detroit, that Dr. DeNike has associated with an unregistered practitioner of medicine, Madame Agens Bonifas, a so-called "natural healer," of 606 Mt. Elliott Avenue, Detroit. That Dr. DeNike was instrumental in having his mother treated by this woman, resulting in the loss of her arm.

Due to the death of his wife, Dr. DeNike asks that consideration of this complaint be postponed until the next meeting of the Board.

The Committee recommends that this request be granted.

By Dr. McIntyre, seconded by Dr. Tiefer:

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 8; No, 0. Motion carried.

Re: Dr. E. F. Welsh, Grand Rapids, Michigan.

Consideration of this case was postponed by Dr. Welsh's request, from the June meeting. Dr. Welsh is still in Leavenworth Prison and requests that a further delay be made in order that he make a personal plea to the Board.

Dr. Welsh was convicted on a narcotic charge in Grand Rapids, March-14, 1930.

The Committee recommends that this request be granted.

By Dr. McIntyre, seconded by Dr. Kelly:

RESOLVED, that the recommendation of the Committee be adopted and that the suspension of Dr. Welsh's license be continued in effect.

Yes, 8; No, 0. Motion carried.

Re: Dr. Wm. P. Mowry, 674 E. Canfield Avenue, Detroit.

Dr. Mowry formerly operated the "Public Health Clinic," at 674 E. Canfield Avenue, Detroit, but has now permanently located in California, leaving his office in charge of his son-in-law, an osteopath, Harold C. Belf, who still continues with the name and photograph of Dr. Mowry in his practice.

The Committee makes no recommendation.

By Dr. McIntyre, seconded by Dr. Brook:

RESOLVED, that Dr. Mowry be cited to appear at the June, 1931, meeting of the Board to show cause why his license should not be revoked for unprofessional conduct.

Yes, 8; No, 0. Motion carried.

Re: Dr. George L. Leslie, c/o Michigan State Sanatorium, Howell, Michigan.

Age: 32 years. Graduate: Dalhousie University, Halifax, Nova Scotia, 1924, after a five-year course.

Dr. Leslie was admitted to Dalhousie upon a certificate from the Halifax County Academy where he obtained his High School Certificate of Grade XII in 1915, according to H. R. Skinner, Asst. Superintendent of Education of Halifax. The final year of the medical course was spent as an extern in Victoria General Hospital at Halifax (1923-24).

Following his graduation in 1924, he has spent the six years in sanatorium residencies, including Her-

man Kiefer Hospital, Detroit, and the Michigan State Sanatorium, where he is now superintendent.

Dr. Leslie asks that his premedical credentials be approved; and his hospital residencies be accepted in lieu of the required rotary hospital service.

The Committee makes no recommendation.

By Dr. McIntyre, seconded by Dr. Yeomans:

RESOLVED, that the request of Dr. Leslie be denied and the applicant be required to meet the Board's requirements.

Yes, 5; No, 0. Motion carried.

Re: Dr. Sylvester Ford, Grand Rapids, Michigan.

The intern certificate from Blodgett Memorial Hospital, Grand Rapids, states that "Dr. Ford's work was erratic, demonstrating exceptional ability and indifference, but on the whole was not sufficiently unsatisfactory that I would care to recommend any interference with the granting of his license. This feeling is furthered by the fact that he is going into a technical field of medicine in which he should be able to do exceptionally well, as he has a splendid mind and is a willing worker when interested."

The Committee recommends that this certificate be accepted as satisfactory.

By Dr. Kelly, seconded by Dr. Tiefer:

RESOLVED, that the recommendation of the Committee be adopted, but that the Secretary be instructed to write the Superintendent regarding the issuance of intern certificates.

Yes, 8; No, 0. Motion carried.

Re: Dr. H. Takvorian, 256½ Pilgrim Avenue, Detroit.

Age: 42 years. Graduate: Constantinople University, 1912. He practiced in Constantinople from 1912 to 1923; has been doing first aid and industrial work in the United States since 1923. Recommended by Dr. Albert L. French, Detroit, also Drs. Kay and Moisesides, Detroit.

Dr. Takvorian asks that the Board waive the one-year medical school requirement and permit him to write the Board examination.

The Committee recommends that this request be denied and that he be required to complete the full Board requirement.

By Dr. Kelly, seconded by Dr. English:

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 9; No, 0. Motion carried.

Re: Michael Alexander Baeff, 1809 W. Grand Blvd., Detroit.

Age: 40 years. Graduate: University of Moscow, Russia, 1911. Practiced in Russia until 1920. Now in the industrial hospital of the Ford Motor Company, Dearborn.

Asks that the Board recognize his school of graduation and permit him to write the Board examination, as a qualification for licensure in the state.

Recommended by Dr. Walter E. Green, 9621 Belleterre Avenue, Detroit; Dr. B. D. Campbell, Medical Department of the Ford Motor Company.

The Committee recommends that his request be denied and that he be required to fulfill the Board's full requirements.

By Dr. Kelly, seconded by Dr. McIntyre:

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 9; No, 0. Motion carried.

Re: May Kolodnaja Bernstein, 2400 Boston Blvd., Detroit.

Age: 32 years. States that she is a graduate of Imperial Medical Institute, Odessa, Russia, in 1922. No application blanks have been submitted.

Asks that the Board recognize her school of graduation and permit her to write the Board examination as a qualification for license.

The Committee recommends that this request be denied, and that she be required to complete the Board's full requirements.

By Dr. McIntyre, seconded by Dr. Tiefer:

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 9; No, 0. Motion carried.

MISCELLANEOUS

Re: Basic Science examination in the State of Washington.

A communication from the Department of Licenses, State of Washington, was submitted, as follows:

"Please be advised that all persons desiring to become licensed to practice any of the healing arts in this state must first take the Basic Science examination, no exceptions."

The Committee recommends that Michigan discontinue the indorsement of Washington credentials until their law is amended.

By Dr. McIntyre, seconded by Dr. Brook:

RESOLVED, that the report of the Committee be adopted.

Yes, 9; No, 0. Motion carried.

Re: Dr. Harold Bellin, 72 Westerlo Street, Albany, New York.

Age: 27. Graduate: Albany Medical College, 1926. Licensed in New York State July 1, 1926, through a Board examination. He has served nine months of rotary service in Moses Taylor Hospital, Scranton, Pennsylvania, and since that time has been Attending Physician to the Medical Clinic of the Memorial Hospital, Albany, and Surgical Assistant.

Asks that the Board accept his hospital work and indorse his New York State license.

Recommended by Dr. Harold Rypins, Secretary of the New York Board, and by Dr. Brayton E. Kinne, Chief of Staff of the Memorial Hospital, Albany.

The Committee recommends that his request be granted.

By Dr. Brook, seconded by Dr. McIntyre:

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 9; No, 0. Motion carried.

Re: Dr. Asher T. Childers, c/o Michigan Children's Fund, Detroit.

Age: 38 years. Graduate: University of Cincinnati, 1923. Licensed in Ohio, July 5, 1923, after a Board examination. He was associated with the Cincinnati Sanitarium for one and one-half years; assistant physician at the Boston Psychopathic Hospital four months in 1925; assistant physician on the medical staff of the Society of the New York Hospital 1925 to 1927; a Fellow in Psychiatry at the Institute for Child Guidance 1927 to 1928. Also with the Bloomingdale Hospital, White Plains, New York, and the Cleveland Institute for Child Guidance, for a time.

Recommended by Dr. Hugo A. Freund, of Detroit.

Dr. Childers is now connected with the Michigan Children's Fund, 51 W. Warren Avenue, Detroit, and requests that the Board indorse his Ohio license.

The Committee recommends that this request be granted.

By Dr. Brook, seconded by Dr. McIntyre:

RESOLVED, that the recommendation of the Committee be adopted.

Yes, 8; No, 0. Motion carried.

By Dr. Brook, seconded by Dr. Tew:

RESOLVED, that the report of the Committee, as a whole, be adopted.

Yes, 9; No, 0. Motion carried.

By Dr. Kelly, seconded by Dr. McIntyre:

RESOLVED, that a Special Meeting be called by the President within two weeks to consider proposed legislation.

Yes, 9; No, 0. Motion carried.

The President designated November 2, 1930, as the date, and Lansing as the place of meeting.

By Dr. Kelly, seconded by Dr. Marshall:

RESOLVED, that the expenses of the Board members while attending this meeting and examination, be hereby approved.

Yes, 9; No, 0. Motion carried.

Re: Traveling Expenses of Board Members:

Dr. McIntyre made a verbal report of a new ruling by the State Administrative Board of seven cents per mile, both ways, for Board members driving their own automobiles to meetings and examinations, and an allowance of \$8.00 per day for hotel expenses while attending such meetings.

On motion the meeting adjourned.

NELSON McLAUGHLIN, M.D., *President.*

F. C. WARNSHUIS, *Secretary.*

Special meeting held at Hotel Olds, Lansing, November 12, 1930.

Present: Drs. McLaughlin, Marshall, Kelly, Brook, Lemire, McIntyre, Tew, Tiefer, English, Yeomans.

Absent: None.

Dr. Nelson McLaughlin, President, in the Chair.

The meeting was called to order by the Chairman.

Re: Federation of State Medical Board Congress, February, 1930.

By Dr. Brook, seconded by Dr. Kelly:

Resolved, that the President and Vice President attend the Annual Congress of the Federation of State Medical Board, February, 1931, as representatives of this Board.

Yeas, 10; Nays, 0. Motion carried.

Re: Board examination dates.

By Dr. Marshall, seconded by Dr. Tiefer:

Resolved, that the Board examination be held at Ann Arbor and Detroit on the usual dates, and that the business meeting be held at Detroit, on Wednesday, June 1-7, 1931.

Yeas, 10; Nays, 0. Motion carried.

By Dr. Marshall, seconded by Dr. Tiefer:

Resolved, that the Board go into executive session.

Yeas, 10; Nays, 0. Motion carried.

Re: Dr. J. Henry Hanson, Detroit

The Secretary reported that a Writ of Certiorari has been issued by the Supreme Court, on November 11, 1931, for a review of the proceedings of the Board in this case.

By Dr. McIntyre, seconded by Dr. Marshall:

Resolved, that this matter be turned over to the Attorney General's Department, together with all records.

Yeas, 10; Nays, 0. Motion carried.

REPORT OF THE REGISTRATION AND STANDARD COMMITTEE

Dr. J. D. Brook, Chairman.

Dr. Frank A. Kelly.

Dr. W. H. Marshall.

Dr. W. Ellwood Tew.

Dr. T. G. Yeomans.

Re: Dr. John Franklin Huber, Ann Arbor, Michigan.

Dr. Huber, a graduate of the University of Michigan (1929) Medical School, who intends to devote himself to the teaching and investigation of Anatomy, requests that laboratory work be accepted in

lieu of the rotary hospital service requirement.

By Dr. Brook, seconded by Dr. Kelly:

Resolved, that Dr. Huber's request be granted.

Yeas, 7; Nays, 0. Motion carried.

Re: Dr. Walter A. Dziuk, 7400 S. Ashland Ave., Chicago, Illinois.

Graduate: Chicago Medical School, 1929. Licensed in Illinois through Board examination, August 27, 1930.

Asks indorsement of his Illinois license by this Board.

The Committee recommends that his request be denied, for the following reasons:

(1) His educational record is poor.

(2) His school of graduation, the Chicago Medical School, is not upon the Michigan list of accredited schools, and is not recognized by forty-two states of the Union.

(3) This school has approximately fifty graduates each year, who may likewise file application for licensure.

By Dr. Brook, seconded by Dr. McIntyre:

Resolved, that this application be tabled until after our conference with Governor Green.

Yeas, 10; Nays, 0. Motion carried.

Re: Dr. Norman M. McClelland, 2412 Delaware Avenue, Buffalo, New York.

Graduate: Memphis Hospital Medical College (now University of Tennessee) in 1913; licensed in Arkansas through Board examination, May 15, 1913. Postgraduate work in New York Post Graduate School; New York Lying-in Hospital; Navy Medical School, and the University of Buffalo Medical School.

Dr. McClelland requests recognition of school of graduation, and issuance of a license through indorsement of his Arkansas credentials.

The Committee recommends that his request be granted for the following reasons:

(1) The classification of this medical school was changed to Class "A" the year following his graduation.

(2) The amount of postgraduate work done, following his graduation.

(3) His record since graduation.

(4) His service in the U. S. Navy.

By Dr. Brook, seconded by Dr. Lemire:

Resolved, that the Committee's report be adopted.

Yeas, 7; Nays, 1. Motion carried.

A recess was then taken to hear Dr. Marshall's report on tuberculosis and insane institutions in the state.

By Dr. Marshall:

Whereas, over 50 per cent of the institutional beds of this country are occupied by tuberculous and insane patients, and

Whereas, the workers in these fields find great difficulty in obtaining physicians to devote their attention to these specialties,

BE IT RESOLVED, that the Michigan State Board of Registration in Medicine accept two years internship in either of these specialties, in institutions approved by the Board, in lieu of the present one-year rotating hospital requirement in a general hospital.

By Dr. McIntyre:

Resolved, that this be amended to three years, rather than two years, of hospital service.

No second. Motion lost.

By Dr. Lemire, seconded by Dr. Tiefer:

Resolved, that this Board adopt Dr. Marshall's report.

Yeas, 10; Nays, 0. Motion carried.

By Dr. Marshall, seconded by Dr. Tiefer:

Resolved, that the Secretary be instructed to obtain a list of the medical personnel of all medical institutions in this state.

Yeas, 9; Nays, 0. Motion carried.

Re: Dr. George L. Leslie, Howell, Michigan (c/o Michigan Sanatorium).

By Dr. Brook, seconded by Dr. Kelly:

Resolved, that the Board's action in the matter of the application of Dr. G. L. Leslie be reconsidered. Yeas, 10; Nays, 0. Motion carried.

Governor Green appeared personally in behalf of Dr. Leslie. After an open discussion and consideration of the application, the following motion was made by Dr. Brook, seconded by Dr. Kelly.

Resolved, that the previous action of the Board be rescinded.

Yeas, 9; nays, 0. Motion carried.

By Dr. Brook, seconded by Dr. Kelly:

Resolved, that the credentials presented by Dr. Leslie be evaluated in this instance as being the equivalent of requirements demanded by this Board.

Yeas, 9; nays, 0. Motion carried.

The President instructed the Secretary to prepare a statement for the newspapers, as follows:

"The Board of Registration in Medicine convened November 12, 1930, and among other business gave reconsideration to the application of Dr. G. L. Leslie. After a thorough review, the receipt of additional qualification requirements, and an evaluation of his recent professional work in the field of tuberculosis, the Board took the following action:

That in this specific instance, the qualifications of Dr. Leslie be evaluated as equivalent to the Board's standards and requirements and that a license be issued to him, provided he passes the Board's written examination."

Re: Dr. Walter A. Dziuk, Chicago, Illinois.

The matter of Dr. Dziuk's application was then considered by the Board.

By Dr. Kelly, seconded by Dr. McIntyre:

Resolved, that the request of Dr. Dziuk for recognition by this Board be denied.

Yeas, 10; Nays, 0. Motion carried.

By Dr. Brook, seconded by Dr. Tiefer:

Resolved, that the report of the Committee, as a whole, be adopted.

Yeas, 10; Nays, 0. Motion carried.

Re: Legislative activities.

A copy of the proposed amendments to the Medical Practice Act was submitted.

It was referred to the Legislative Committee for revision and such action as they deem necessary.

By Dr. Kelly, seconded by Dr. Brook:

Resolved, that the expenses of the Board members incurred while attending this meeting, be hereby approved.

Yeas, 10; Nays, 0. Motion carried.

Upon motion the meeting adjourned.

NELSON McLAUGHLIN, M.D.,
President.

F. C. WARNSHUIS, M.D.,
Secretary.

which according to Dr. W. A. Scott, was extremely interesting and educational.

Dr. Dean W. Hart, son of the late Dr. Eugene Hart tendered his application to the Clinton County Medical Society for membership in that Society, which gave him a unanimous vote for acceptance.

Dr. W. A. Scott and Dr. F. E. Luton were appointed as committee to draft resolutions relative to the death of Dr. Eugene Hart to be permanently entered into the minutes of the Society and another copy of the same to be transmitted by the Secretary of the Society to his bereaved family.

There being no further business, the Society was adjourned until its next regular monthly meeting.

T. Y. Ho, *Secretary-Treasurer.*

IONIA-MONTCALM COUNTY

The October meeting of the Ionia-Montcalm Medical Society was held on Tuesday, October 14, 1930, at the Ionia Country Club, the first feature being a chicken dinner. There were thirty members and three guests present.

The scientific program prepared by Doctors Peabody and Robinson, of Lake Odessa, was presented under the chairmanship of Doctor Peabody.

1. Dr. John Sander, of Lansing, gave a comprehensive and instructive review of poliomyelitis; its etiology, diagnosis, course of treatment, emphasizing isolation and prolonged rest during convalescence, from four to six weeks.

2. Dr. L. G. Christian, of Lansing, read a practical paper on the treatment of hypertension. According to this paper, the chief factors in high blood pressure are: heart muscle action, sclerosis, if any; viscosity of the blood, and constriction or dilatation. Since the only one of these factors which can be influenced by treatment is the last, our best efforts can be directed toward relieving the constriction factor. The weapons enumerated by the doctor as useful toward this end, are: diet, rest, limitation of work, proper attention to the bowels, certain drugs (mistletoe), hydrotherapy, bleeding for emergencies, and finally, the faith of the physician and the patient in the physician.

3. Dr. Robert Breakey limited his paper to a discussion of pyelitis, emphasizing the value of drugs and the lack of value of diet in most cases.

The business meeting followed, with Doctor Robertson presiding.

Minutes of the September meeting were read and approved.

Report of the Committee to confer with Dentists was received. Motion carried that report be accepted.

Motion made and carried that the President and Secretary draft a by-law admitting associate members.

Doctor Pinkham reported informally such part of the State meeting as he attended.

The petition of Federated Womens Clubs and Parent Teachers Association asking the Society to request the aid of the State Board of Health in their Pre-School Round-Up Clinic and Toxin-Antitoxin campaign, was received and motion carried that the Society make such request.

Dr. G. E. Horne volunteered to serve in the clinics for toxin-antitoxin administration.

Dr. C. T. Pankhurst gave a talk on the matter of securing some division of State funds used to pay for minor surgical operations at the University Hospital. Motion was carried that it is a sense of this Society that such funds as are used to pay surgical fees in these cases, should be apportioned to local surgeons whenever possible.

The meeting was adjourned until November 11 at Greenville. Doctors Bower and Horne were named to have charge of this meeting.

JOHN J. McCANN, *Secretary.*

COUNTY SOCIETIES

CLINTON COUNTY

The annual meeting of the Clinton County Medical Society was held at the Steel Hotel at high noon, October 17, 1930. After lunch the following officers were elected for the coming year: President, Dr. W. B. McWilliams of Maple Rapids; vice president, Dr. G. H. Frace, of St. Johns; Secretary-Treasurer, Dr. T. Y. Ho, the latter to succeed himself.

Dr. W. A. Scott, delegate to the State Society meeting held at Benton Harbor, gave a short report on the Society proceedings in the House of Delegates, and voiced a high praise for the well balanced program of the Michigan State Medical Society,

LENAWEE COUNTY

The regular meeting of the Lenawee County Medical Society was held at the Adrian City Club, President Marsh in the chair. Fifteen members were present. After the dinner, the meeting was called to order. It was moved, seconded and carried that the names of Dr. Tubbs of Blissfield and Dr. James A. Blanchard of Morenci be accepted to membership in the society. President Marsh requested that the officers for the ensuing year be elected at the December meeting, and for that purpose appointed for nominating committee Drs. Stafford of Adrian, Hammel of Tecumseh, and Raabe of Morenci. Dr. Morden read the letter of condolence prepared by the special committee to send to Mrs. Veazey on account of the sudden death of her husband, Vice-president A. H. Veazey of Hudson. It was moved, seconded and carried that a copy be sent to Mrs. Veazey and that it be spread upon the minutes of the society.

President Marsh presented the subject of the fee schedule for the care of indigent cases as being unfair in that the members from outside the city of Adrian had no part in its preparation, that the schedule had never been accepted by the County Society. Statements were made that some of the supervisors had refused to pay mileage for hospital surgical cases in which operation was performed by out-of-town men, claiming that they could get the Adrian doctors to operate and that there would be no mileage charge. It was suggested by Dr. Whitney of Adrian that we notify the supervisors that the Adrian doctors would refuse to operate in indigent cases in which the patient had been previously seen by a member from outside the city unless requested by that member, thus giving the out-of-town members a fair chance with the members in Adrian. It was moved, seconded and carried that the Chair appoint a committee of three to confer with the supervisors relative to a revision of the schedule for indigent cases. President Marsh appointed Dr. Stafford of Adrian, Dr. Hammel of Tecumseh, and Dr. Westgate of Morenci.

After the business meeting, Dr. James Pierce of Ann Arbor spoke on the subject, "The Bleeding Uterus." He divided the subject under the classification of young unmarried women, married women between the ages of twenty-one and the menopause, and women past the menopause, with special reference to the first classification. The causes enumerated in that class were (1) endocrine imbalance, (2) purpura, (3) hypocalcemia, (4) hemophilia, (5) diseased endometrium, and (6) new growths.

C. H. WESTGATE, *Secretary*.

Copy

November, 1930.

To Mrs. A. H. Veazey,
Hudson, Michigan.

Dear Madam:

The members of the Lenawee County Medical Society wish you to know of their sympathy for you in the death of Dr. Veazey. We also wish to express our sorrow that his loss has entailed. Always considered one of our most valued members, his worth to his community was never more appreciated than by the members of our Society. We were ever impressed by his high type of character, his faithfulness and sympathy to his clientele, and his loyalty to the best tenets of the medical fraternity. In lieu of formal resolutions, kindly accept this expression of our respect, and our best wishes tendered in all sincerity.

By Special Committee—

ESLI T. MORDEN, M.D.
WM. E. JEWETT, M.D.

SHIAWASSEE COUNTY

The October meeting of the Shiawassee County Medical Society was the occasion for the honoring of one of the pioneer physicians of central Michigan, the late Dr. Jabez Perkins, of Owosso. A large portrait of the doctor was, by request of his widow, now living in California, presented to the society and Memorial Hospital by Dr. A. M. Hume, his former associate and partner. The presentation was made a short ceremony preceding the regular meeting of the society. At the conclusion of Dr. Hume's memoir, in which he spoke feelingly of his relations with Dr. Perkins, the picture was accepted on behalf of the Board of Trustees of the hospital, by chairman J. H. Robbins, who was said by Dr. Hume to be one of the old doctor's babies! Dr. F. A. Watts, president of the society, accepted in behalf of the society. He came to Owosso some time after the death of Dr. Perkins but had often heard his patients speak of him.

After luncheon, the speaker of the day, Dr. Lafon Jones, of Flint, was introduced and addressed the society on "Diagnosis and Treatment of Meningitis." There having been a notable increase in the number of cases of this disease in central Michigan the past year, the subject was a timely one, and Dr. Jones' talk was very instructive to the large number present.

One new member was received into membership, Dr. Harold M. Fox, who has recently located in Owosso.

W. E. WARD, *Secretary-Treasurer*.

WOMAN'S AUXILIARY, MICHIGAN
STATE MEDICAL SOCIETY

MRS. L. J. HARRIS, President, Jackson, Mich.
MRS. J. EARL MCINTYRE, Secretary, Lansing, Mich.

JACKSON COUNTY

The Legislative Committee of the Woman's Auxiliary to the Jackson County Medical Society are planning several activities for this year. The inspiration for this came in a large measure from the wonderful address delivered at St. Joseph last September before the Auxiliary for the State Medical Society by Mrs. J. H. Mundt of Chicago. Those of us who had the pleasure of listening to her, returned to our homes firmly resolved to work for the interests of those men who are giving the best part of their lives to medical service.

We have placed ourselves on the mailing list for the Senate and House Journals and will keep informed on all matters of medical legislation which may come before the next session at Lansing.

Contacts will be made with Senator and Representative from our county.

We are prepared to work in the various clubs, P. T. A. organization and churches under and with the coöperation of the Jackson County Medical Society, in giving information on any matters affecting the medical fraternity. At our last regular monthly meeting we had a member of the local medical society explain the health campaign they are sponsoring and are coöperating with them in the matter of public health examinations.

MRS. E. S. PETERSON, *Chairman*.

ETHICS IN INDUSTRIAL SURGERY

FRANK McCORMICK, M.D.†

DETROIT, MICHIGAN

Medical ethics is as old as the practice of medicine and probably in some form it antedated Hippocrates himself. So long as medicine is to continue as a learned profession it must retain the highest of professional attributes. The physician must safeguard the interests of his patient and preserve his own self-respect by a fine regard for the feelings of brother practitioners. At times this demands marked unselfishness and almost self-effacement on the part of the conscientious physician. Some consider the Hippocratic oath as obsolete as applied to present day conditions. Any rules for medical conduct are superfluous unless they are workable and instructive.

The human conscience remains the best guide for man's ethics. But that conscience must be made intelligent so as to adjust itself to present day needs in medicine. Centuries of medicine have not changed the mind of man, but conditions under which medical science is practiced have changed immeasurably. This is particularly true of industrial medicine and surgery.

Industrial surgery is an infant specialty. In some of our larger centers such as Detroit it assumes large proportions. The old relationship between physician and patient has been entirely changed. It is further complicated by the introduction of other factors, as compensation laws, insurance liability and contract surgery, to such an extent as to confuse the most conscientious physician. There is no branch of medicine so prone to commercialization as industrial surgery. In these cases the financial responsibility is shifted from the patient to the employer or an insurance company. The doctor is then dealing with corporations who demand a contract or at least look upon medical service as a commercial commodity.

The confidence and respect for the doctor by the patient has been put in the background and is quite overshadowed by the financial and legal aspects of the case. Large corporations with insurance companies financially concerned have gradually assumed control of the situation and have arrived at the point where they either employ the doctor for full time at a stipulated salary or dictate the amount of fees to be charged. All this is to be expected in an industrial age, and in many cases may be considered the most satisfactory arrangement under present conditions. Unfortunately, in the Detroit area at least, it has led to more serious professional complications. A number of physicians, in a desire to increase their incomes, have been soliciting work from factories already being cared for by competent surgeons duly appointed. These physicians do not seem to realize that soliciting work from a factory already satisfactorily cared for by another doctor is just as bad as for one physician to "steal" another physician's patient in family practice.

Some of the liability insurance companies have been quick to take the hint. Knowing that medical men do not respect each other's rights they have taken over factory work to be "bid on" by interested industrial surgeons. It is deplorable that profes-

sional men should be "pitted" against one another in the mad struggle for money. The evil extends further as a lowering of fees lowers the self respect and dignity of the physician, and eventually lowers the standard of work done by the industrial surgeon. Industrial surgeons cannot command the respect of their patients or the employers unless they are respected by their fellow surgeons. A physician should have a friendly consideration for his professional brother and should not regard him as a competitor. This is based on commonly accepted medical ethics. No Hippocratic oath is necessary. A man may say "amen" to a good sermon and next day double-cross his neighbor. Ethics, to be worth-while, must be adhered to. We must be ethically conscious. The fact that one physician acts unprofessionally should not make it an excuse for others to follow his example. It is desirable that we take a fresh start and base our behavior on the fundamentals of professional conduct. This is especially true for men doing industrial surgery. Industrial surgeons in Michigan should not only uphold a high standard of skill and command the respect of the public, but as well rely on the good faith of each other.

To this end the Industrial Relations Committee of our County Society has drawn up the following code of ethics for those doing industrial surgery. It is workable and instructive and will serve as a guide for better relations among medical men. It is hoped a similar code will be adopted by medical men in the State generally.

THE INDUSTRIAL RELATIONS COMMITTEE
OF THE
WAYNE COUNTY MEDICAL SOCIETY
CODE OF ETHICS

The Industrial Relations Committee, in establishing the following code, realize the futility of outlining in detail any definite set of rules to govern Industrial Surgeons.

All we can hope to do is to draw up a general working agreement, which will provide for a better understanding between physicians having common interests in carrying on industrial work.

We contend that the Industrial Surgeons of Detroit are represented by men of the highest professional and ethical standing and we desire that this relationship be preserved and maintained.

We deplore the fact that misunderstandings at times occur. We also object to such a friendly relationship being jeopardized by insurance companies who cause doctors to "bid" for industrial work and "pit" one physician against his neighbor.

We suggest that the following rules be subscribed to by all physicians doing Industrial Surgery in Wayne County:

1. The Industrial Surgeon should consider his relations with the factory which he serves in the same manner as a physician called to attend a family in general practice.
2. He should in no way solicit business from or advertise himself to any industrial plant unless he positively knows that the plant in question is not being cared for by any other surgeon.
3. He should refuse appointment as surgeon by any industrial concern or insurance company concerned in the transaction until he is sure that the factory has no regular surgeon, that the surgeon has resigned, or, has been officially discharged.
4. If necessary, he shall acquaint himself of the actual facts of the case by first of all calling upon the surgeon himself for a statement before entering into any negotiations whatever to take over new work.
5. He shall refuse to go in attendance to any fac-

†Dr. Frank McCormick graduated from the University of Michigan, M.D. 1905, following which he spent a year's internship at the University of Michigan Hospital. He is Attending Surgeon, Industrial Surgery Division of Grace Hospital, Detroit. Dr. McCormick is a member of the Industrial Relations Committee of the Wayne County Medical Society, as well as Chairman of the Industrial Relations Committee of the Michigan Association of Industrial Physicians and Surgeons.

tory regularly under the supervision of another doctor, except in emergency.

6. He shall under no conditions discuss rates or fees to any factory or insurance company, either in person or by letter, if this factory is being regularly cared for by another doctor.
7. Any compensation case following injury in a factory being treated by a physician other than the regular company's surgeon, shall not be interfered with in his treatment providing he shows reasonable skill and diligence in attending the case.

It is provided, however, that the surgeon regularly employed by the company shall be privileged at proper times and under proper conditions to consult with the attending physician to determine the progress of the case if the employer or insurance company involved so request.

Both physicians concerned shall preserve a friendly relationship and make the welfare of the patient of paramount interest.

8. Any infringement of these rules shall be construed as an unfriendly act and shall be referred to the Ethics Committee of the Wayne County Medical Society for decision.
9. The Industrial Surgeon should in every way possible raise the standing of this branch of the profession by—
 - (a) Personally supervising as much as possible the care of patients at office and factory.
 - (b) Preserving a standard of fees paid by insurance companies sufficiently high to insure skillful and painstaking service.
 - (c) To foster a relationship of mutual respect and trust, not only between the Industrial Surgeon and his employers but an ethical relationship with other industrial surgeons.

SUPRARENAL CORTICAL INSUFFICIENCY AND CYTOTOXIC CONTRACTION OF SUPRARENALS

A clinical and pathologic study of two cases of suprarenal cortical insufficiency was made by Otto Saphir and Herbert F. Binswanger, Chicago. One case, clinically diagnosed as Addison's disease, showed changes which histologically are similar to the ones found in cytotoxic contraction of the suprarenals. An analysis of this case revealed that the blood pressure reached 106 systolic and 78 diastolic and that the asthenia developed only shortly before the patient died. A possible clinical differentiation between Addison's disease and cortical insufficiency of the suprarenals may be made. The second patient who died shortly after an appendectomy, showed similar lesions but much less marked. There were severe degenerative changes throughout regenerated cortical cells. Clinically, the only symptom that could be referred to suprarenal lesions was a diffuse pigmentation of long duration. The sudden death of the patient was attributed to an acute incompetence of the regenerated cortical cells following the operation—*Journal A. M. A.*

PHYSIOLOGIC DISTURBANCES INCIDENT TO OBSTRUCTIVE JAUNDICE

A. C. Ivy, Chicago, asserts that in obstructive jaundice there exist a number of failing physiologic mechanisms and it is not known which one is primarily concerned. The fundamental nature of the reactions involved in producing the physiologic disturbances is not completely understood at present. The literature indicates that a carbohydrate diet with milk and cod liver oil and calcium administration are worthwhile therapeutic procedures in this condition. The fact that the problem is being actively attacked by several groups of investigators augurs well for the future of the understanding of physiologic disturbances in jaundice.—*Journal A. M. A.*

THE DOCTOR'S LIBRARY

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 14, Number 2. (New York Number, Sept., 1930.) Octavo of 275 pages. W. B. Saunders Company, Philadelphia and London. Paper, \$12.00; Cloth, \$16.00 Net.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 14, Number 1. (University of California Number, July, 1930.) Octavo of 278 pages with 54 illustrations. Per clinic year, July, 1930, to May, 1931. Paper, \$12.00; Cloth, \$16.00 Net. Philadelphia and London: W. B. Saunders Company, 1930.

SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 10, number 5. (Pacific Coast Number, October, 1930.) 271 pages with 136 illustrations. Per clinic year (February, 1930, to December, 1930.) Paper, \$12.00; Cloth, \$16.00. Philadelphia and London.

VOLUME II, MEDICAL HISTORY OF MICHIGAN. Edited by Dr. C. B. Burr. Bruce Publishing Co., St. Paul, Minn., 1930.

It is a pleasant task to review the second volume of our Society's Medical History of Michigan. With the publication of this volume, we can know that the task so creditably begun in Volume I has been successfully ended. It is certain that no one of those who had to do with the beginnings of the arrangements for the compiling of this history had any conception of the great variety and amount of information that would be found in the completed work. It includes, not only a complete history of the achievements of our profession and its organizations, but a history of the development of nursing and of private hospitals and State institutions for the care of the sick. Some idea of the wide scope of the two volumes may be had by a reference to the chapter titles.

The present volume begins with a chapter on "Controversies." It contains much that is familiar to present-day members of the state society. One finds, on reading it, that differences of opinion among medical men are not of recent development. Dr. Brodie's statement, "I don't care a — whether I fight with the majority or the minority, so long as I fight," reflects an attitude of mind that seems to persist in the profession to the present day. Of special interest is the spirited controversy indulged in at the Kalamazoo meeting of the Society in 1883, brought on by the presidential address of Dr. G. W. Topping in which he attacked the faculty of the University. In spite of the bitterness of the discussion one is impressed by some of the ideals for the profession which the president had in mind. He suggests discussion of: (1) The best means of securing a higher standard of study and attainment in the profession generally, (2) Legislation to protect the people against irresponsible and unqualified medical practitioners, (3) The manifest injustice of giving gratuitous treatment to patients able to pay for medical services. Our State Society is still giving its most serious attention to these same subjects.

In Chapter II, which deals with "Malpractice, Litigation and the Physician as a Witness," is presented in full the presidential address of Dr. Foster Pratt, who was president of the Society in 1878. The author says, "The address dealt with the Newcomer-VanDeusen case, a suit for false imprisonment directed against Dr. VanDeusen by a sometime patient in the (then) Michigan Asylum for the Insane at Kalamazoo. Dr. Pratt dwelt, naturally, upon the medical aspects of the case, pointed out the injustice of the suit and its disagreeable outcome, paid tribute to Dr. VanDeusen as a physician of high standing, devoted to his patients and

never sparing effort looking to their betterment. It is a glowing appreciation of an excellent medical official of a state hospital, it is a categorical denial of the then current aspersions upon institutional care, it is a caustic commentary on medico-legal court procedure, it points warnings to medical men, and it is a logical presentation of a subject of deep concern to society. It is hoped that its publication in full in this history may have some part in the preservation of a veritable medical classic." The author's appreciation of this address is fully understood after its perusal and the preservation of this document is alone a justification for the publication of this history.

The chapter on "Medical Defense," written by Dr. Frank B. Tibbals, is full of humorous reminiscences and sound conclusions. Dr. Tibbals is the father of our Society's medical defense plan and it is due to his experience, good judgment and indefatigable labor that it has rendered so great a service to our members.

The next chapter, entitled "Medical Miscellany and Medley," is quite properly captioned. While probably no one would be especially interested in all details, it has something of interest for every student of medical history in Michigan. It is a veritable storehouse of information. Interesting facts and quaint anecdotes about doctors from every section of Michigan are made matter of record in this chapter. The following chapter, on "Extra Professional Activities," is of the same general nature, containing much of interest concerning the activities of doctors in fields not strictly medical. The chapter devoted to "Women Physicians" serves to record the history of Michigan's women physicians in much the same general style as the two preceding chapters. There is also a very complete discussion of "Upper Peninsula Medical Men and Medicine," a most interesting section in this chapter having been written by Dr. William K. West, who has spent so many years in this northland. If one should ever wish to know about any doctor who practiced in Michigan before the present century, he will be quite likely to find something about him in one of these four chapters.

Another chapter deals with the "History of Our Organizations as a State Society." The Medical Society of Michigan was organized in 1820, with William Brown as its first president. There have been but two breaks in its continuous operation, one from 1851 to 1853, the other from 1860 to 1866. The chapter contains many details of the work of the organization and its officers. There follow most interesting sketches of the development of various county societies throughout the state. Especially to be noted is a reproduction of the fee bill adopted by the St. Clair and Sanilac County Medical Society in 1869.

Chapter X, on "Hospitals and Nursing," contains an authentic history of Michigan Hospitals, both public and private, and the development of training schools for nurses. The earliest hospital in the city of Detroit to have a continuous existence is St. Mary's, dating from June 9, 1845. "State Psychiatric Hospitals and Medical Establishments for the Mentally Handicapped or Retarded" is not only a history of the development of the hospitals for the mentally handicapped but it also gives one a very adequate idea of the development of the field of psychiatry and of the men who have made its development possible in Michigan.

The final chapter has to do with "The Military Service of Michigan Physicians." It is a remarkable record of the men who have served their nation in time of war. The profession can well be proud of this chapter of Michigan Medicine.

The Medical History of Michigan is a source of

joy and satisfaction to us all. That which we set out to do has been achieved, and more. In these two volumes are recorded for all time medical history which would never have otherwise been preserved. In addition to this it is a pleasant book to read. One can derive from it not only information but humor and philosophy with which to season the facts. To Dr. Burr we are and always shall be much indebted for the great effort and wisdom and perseverance that has made this history possible. That he has our gratitude, he may be assured. This is his reward. He has also the reward that comes to every man who has done well a great work—the sense of achievement.

JOHN B. JACKSON.

SELECTED READINGS IN THE HISTORY OF PHYSIOLOGY. Edited by John Farquhar Fulton, M.D. Formerly Fellow of Magdalen College, Oxford. Sterling Professor of Physiology, Yale University. Charles C. Thomas, Publisher, Springfield, Ill. Baltimore, Md. 316 Pages. 1930. Price \$5.00.

Physiology in ancient times, the author tells us, included a study of all natural phenomena. In the seventeenth and eighteenth centuries the term became restricted to include a study of the functions of living organisms. Naturally physics and chemistry have a great deal to do with vital phenomena. Knowledge of the law of diffusion of gases was necessary to an understanding of the way in which substances pass from the blood to tissues through the capillary walls, and these generalizations are required also for interpretation of the activity of the kidneys. So we have extracts from the writings of such men as Robert Boyle, the early physicist who studied the resistance of gases.

The writer gives interesting information regarding the ages of the authors in the case of sixty-five of the selections. The result is credit to both youth and age. Eleven contributions were written by men between the ages of twenty and thirty years; twenty-three were written by persons between the ages of thirty and forty years; the remaining forty-two were written by workers over forty. De Reaumer was past sixty-nine when he carried out his investigations on the digestive juices of his pet kite.

Another interesting subject is the amount of physiologic investigation that has been carried out on the human subject. A grave charge has been made against physiologists of the present day to the effect that their work tends to be impracticable so far as man is concerned. Of course the work of Beaumont is known to everyone. The author finds that fourteen of the eighty-five selections were practically entirely based on human experimentation. He mentions in particular the work of Sanctorius, Fabricius, Spallanzani, Blagden, Beaumont, Haldane, Priestly, Bancroft, Cushing and Lewis.

Some of the passages are interesting from the fact that in them we have the personality of the writers revealed.

In his plan the author observes the following divisions namely: general principles; the inoculation of the blood; the capillaries, respiration, digestion; the central nervous system. The selections in each section range from the earliest real contribution in any language to the latest work in the respective fields.

Source books are rather rare in science; we know of none since the notable selection made by Camac in 1909, entitled *Epoch-Making Contributions in Medicine and Surgery and Allied Sciences*, in which a number are given at much greater length, but the

†See Editorial Page of this number of the JOURNAL M. S. M. S.

field in the present "Selected Readings" is much broader. Source books have been recognized as valuable aids in other fields, particularly in history. The present work holds a somewhat similar relation to the history of physiology as, say, the splendid work of Morgan does to English history.

Each extract is prefaced by a brief biographical account of the author and in many instances we have a well chosen illustration either a facsimile of a page of an early work, a cut showing an interesting piece of apparatus or a picture of one of the many authors.

A noteworthy feature is the fine workmanship in the printing and design of the book. It is a volume that the physician or surgeon as well as the professional physiologist will prize as an invaluable addition to his library.

—J. H. DEMPSTER.

A SYNOPSIS OF MEDICINE. By Henry Letheby Tidy, M.A., M.D., B.Ch. (Oxon.), F.R.C.P. (Lon.); Physician to St. Thomas' Hospital; Consulting Physician to the Royal Northern Hospital; formerly Assistant Clinical Pathologist and Medical Registrar to the London Hospital; Fifth Edition, Revised and Enlarged; New York, William Wood and Company. Price \$6.00 net.

This is the fifth edition of a work which first appeared in 1920. In the arrangement of the subject matter it follows closely Osler's *Principles and Practice of Medicine*. In this edition many new articles on infections such as tularemia, sickle-cell anemia, agranulocytosis, etc., have been added. Many other articles have been re-written and added to so as to bring them in line with the latest authoritative opinions on the various diseases. All matter which appeared unnecessary in a work of this nature has been eliminated, but even after so doing this edition contains thirty more pages than the previous one.

PIERSOL'S HUMAN ANATOMY, INCLUDING STRUCTURE AND DEVELOPMENT AND PRACTICAL CONSIDERATIONS. Ninth Edition, Revised under the Supervision of G. Carl Huber, M.D., Sc.D., Professor of Anatomy, Director of Anatomic Laboratories and Dean of the Graduate School, University of Michigan, with 1,734 illustrations (1,522 original; 460 in color), 2,104 pages. J. B. Lippincott Company, Philadelphia, Pa. Price, \$10.00.

This revision of Piersol's *Human Anatomy* must be regarded as a significant contribution to the medical textbook literature. The text, first issued in 1907, was a composite work written by a group of American anatomists (Thomas Dwight of Harvard, Carl A. Hamonn of Western Reserve, J. Playfair McMurich of Toronto, and George A. Piersol and J. William White of Pennsylvania). It attained considerable popularity in anatomical instruction because of the completeness and logical presentation of the material. The various phases of anatomy were correlated in a way not seen in other texts.

Although the work had seen eight editions by 1923, it has had no thorough revision since it was written. The terminology had become more or less obsolete and certain sections were not in accord with the findings of latest research. Since death and retirement have rendered revision by the original authors impossible, Dr. G. Carl Huber, with the assistance of Professor Rollo McCotter and other members of the University of Michigan anatomical staff, has undertaken the task.

The revision of terminology to adapt the work to present day anatomical teaching has been one of the significant changes in the work. Text changes have been freely made in the sections dealing with the venous, lymphatic and sympathetic systems. The section on the central nervous system has been thoroughly revised and the "practical considerations" of each section have been amended by Professor Eldridge L. Eliason of the University of Pennsyl-

vania surgical staff. Some new illustrations have been added. The pagination of the work remains as in the preceding edition so that laboratory manuals based on Piersol are still usable.

This edition presents the up-to-date viewpoint in anatomy in which the gross microscopic and surgical anatomy are correlated with one another and with embryology and neuroanatomy. Its value is not alone in the dissecting room: it is of equal importance as an authoritative work of reference to the surgeon and physician in active practice. By everyone, but in particular those (and the number is large) who have received their anatomical training under Dr. Huber, will this revision be accorded a special welcome.

—W. T. DEMPSTER.

ILLUSTRATED PRIMER ON FRACTURES. Prepared by the Coöperative Committee on Fractures, under the auspices of Section on Surgery, General and Abdominal, and Section on Orthopedic Surgery, in coöperation with Department of Scientific Exhibit of the American Medical Association. Price \$1.00. American Medical Association, 535 North Dearborn Street, Chicago, Ill.

This "Primer" is intended for use by both students and practitioners. It is not for the purpose of standardizing treatment, but to suggest what constitutes acceptable methods of treatment. It contains material which found such favorable responses on the part of the visiting physicians at the Scientific Exhibit of the American Medical Association. After each annual session there was received a large number of requests for the charts, both from physicians and teachers in colleges. It was deemed advisable, therefore, to reproduce under one cover all of the illustrations and in addition to incorporate appropriate legends. The legends were written by the members of the Co-operative Committee on Fractures: Drs. Allison, Carrach and Speed.

GUIDE TO THE STUDY OF HISTOLOGY AND MICROSCOPIC ANATOMY, FOR THE USE OF STUDENTS IN MEDICAL SCHOOLS AND COLLEGES. Avery E. Lambert, Ph.D., Professor of Histology, School of Medicine, State University of Iowa. 262 pages; 152 illustrations. P. Blakiston's Son & Company, Inc., Philadelphia. Price \$3.00.

The histology laboratory directions of the State University of Iowa Medical School have been collected. They provide a concise and somewhat comprehensive survey of the field. The essential features of each issue are emphasized and the student is urged to make sketches illustrating the facts as he sees them. One may suspect, however, that the great number of illustrations figured will detract the student's attention from his microscope. The work is designed to be used with the Bremer "Text-books."

TEXT-BOOK OF GYNECOLOGY. By Arthur H. Curtis, M.D., Professor and Head of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of the Gynecological Service, Passavant Memorial Hospital, Chicago. 380 pages with 222 original illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, \$5.00.

This volume has a number of commendable features as a textbook. It was primarily written for students. It is a true monograph containing the viewpoint of the author, including all that he considers vital in gynecology. It is well illustrated by original drawings, most of which are actual reproductions from the author's personal cases. An endeavor has been made to portray his operative technic. We believe this has been accomplished as well as possible pictorially. Each chapter contains a bibliography that will be found valuable to those who would pursue the subject farther. The student and

the general practitioner will find the work fitted to their needs and as for the gynecologist it will be found to contain all that can be expected in a carefully prepared monograph.

GALLSTONES IN AMPULLA OF VATER

A group of 160 cases was analyzed by E. Starr Judd and James M. Marshall, Rochester, Minn., in which one or more stones were found in the ampulla at operation and in which other stones were not found in the hepatic or common bile ducts. In many other cases stones were found lodged in the ampulla, but they were associated with stones in other portions of the extrahepatic bile ducts; such cases were not included in the group studied. The majority of the patients were past middle age, the average age being 50 years; three-fourths of the patients were aged between 40 and 60 years. The youngest patient was a boy, aged 15. The ratio of females to males was approximately 2:1. In 72 (45 per cent) of the 160 cases, one or more operations had been performed on the biliary system; in several cases as many as three or four operations had been performed: cholecystostomy, cholecystectomy or choledochostomy, or all three. In 55 per cent of the cases relief had not been obtained and the patients continued to suffer from the symptoms that they had prior to the operation. In 24 per cent of the cases there had been a period of complete relief following the operation, varying from three months to thirty years; in the remaining 21 per cent some relief had been obtained, but enough of their original symptoms persisted to induce the patients to seek further relief. Fifty-four patients had had cholecystostomy performed, thirty-three had had cholecystectomy, and seven had had choledochostomy. Seventeen (10.6 per cent) of the patients had external biliary fistula when they presented themselves for examination at the clinic, some of them for as long as two years. The most characteristic feature of stone in the common bile duct is the intermittent nature of the symptoms. Pain is the most common symptom of stone in the common bile duct. The pain usually is of the classic colicky type. In the authors' cases the pain was either mild or severe in 155 of the 160 cases. In five cases a most careful examination could not elicit a history of pain of any kind. Intermittent jaundice was present in 117 (73 per cent) of the cases. There were thirty-seven cases (23 per cent) in which a history of jaundice could not be elicited at any time during the course of the illness. Constant and apparently complete jaundice was noted in only six of the cases for a period of more than a month. In their series the highest reading for serum bilirubin was 22.7 mg. in a case of apparent complete obstructive jaundice of five months' duration. Symptoms of sepsis, as evidenced by attacks of chills and fever, were present in eighty-one (51 per cent) of the cases. Bile was recovered on duodenal drainage in 83 per cent of the cases. In 124 (77 per cent) of the 160 cases a single stone was found in the ampulla at operation. In fifteen (9.5 per cent) there were two stones and in twenty-one (13 per cent) there were more than two. In 110 cases (69 per cent) there were stones in the gall-bladder as well as in the ampulla. There were forty-two (26 per cent) cases in which a stone in the ampulla was the only stone present in the biliary system and there were eight cases in which a stone in the ampulla was the only stone found at the time of operation. In many of the cases the stone in the ampulla was found firmly lodged and adherent to the mucosa of the duct. In others the stone was small and round and apparently floating free. There were twelve cases in which there was a cholecysto-

enteric fistula. In nine cases the fistula opened into the duodenum, in two cases into the colon, and in one case into the stomach. They describe their technique of operation and cite illustrative cases.—*Journal A. M. A.*

FINDS FAULT WITH DOCTORS OF FICTION

The false impression of physicians which one would get from reading about doctors in most novels was deplored by Dr. C. Jeff Miller of New Orleans, in his presidential address before the recent meeting of the American College of Surgeons in Philadelphia.

Dr. Miller was particularly grieved over "Arrow-smith," though he had fault to find with many other doctors of fiction. Among those he mentioned were Sherlock Holmes' Dr. Watson, Ostend Freeman's Dr. Thorndike, and doctors in works of Chaucer, Bernard Shaw, Maartens, Robert Herrick and Mary Roberts Rinehart.

"It is a curious thing that so few novels in which doctors appear present them as they really are, for surely no profession offers the novelists more material in the way of tragedy or comedy, or in the lights and shadows of life," he said. "In many novels physicians are little more than lay figures. They are labeled M.D. and they are frequently very pleasant people, but they have none of the characteristics of their profession, and they might equally well be lawyers or manufacturers or business men. Even the ambulance surgeons, who arrive with verve and dash at exactly the right moment, are a colorless crew, and as for the coroners and their assistants—whose name is legion in this day of countless detective stories—most of them are egregious asses."

Dr. Miller admitted that there are unworthy men in the ranks of medicine just as there are elsewhere, but he felt that when one undertook to present a cross section of life one should be honorable about it and present it as it really is. He was particularly critical of the various doctors described in "Arrow-smith" and similar books. As an antidote to this type of doctor, he suggested Dr. William MacLure of the town of Drumtochty.

"It would be well for us to remember, since we are of the new day in medicine, that when they come to pass through the Valley of the Shadow of Death, it is not upon the Arrowsmiths but upon the William MacLures that men and women would cast their burdens," he concluded.—*Science Service.*

SCURVY IN ADULTS

Nine cases of scurvy in adults were studied by Stacy R. Mettier, George R. Minot and Wilmot C. Townsend, Boston, eight of which occurred in elderly males. Scurvy can be precipitated by infectious processes in individuals with certain types of chronic nutritional instability. Arteriosclerosis may favor the development of the disease. In adults with scurvy, anemia is common and often pronounced. Fruit, green vegetables and fresh liver, foods which are rich in vitamin C, can cause in these patients a prompt response of reticulocytes and rapid regeneration of blood. Neither large doses of iron nor the substance potent in pernicious anemia appear to accomplish these effects. The bone marrow in two cases of scurvy was examined microscopically, and it appears to be of the type that occurs in what is often spoken of as secondary anemia. Vitamin C apparently can have a specific effect on erythropoiesis when there has been a chronic lack of this vitamin.—*Journal A. M. A.*

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E. R. Sealey	OCT 8	OCT 1

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